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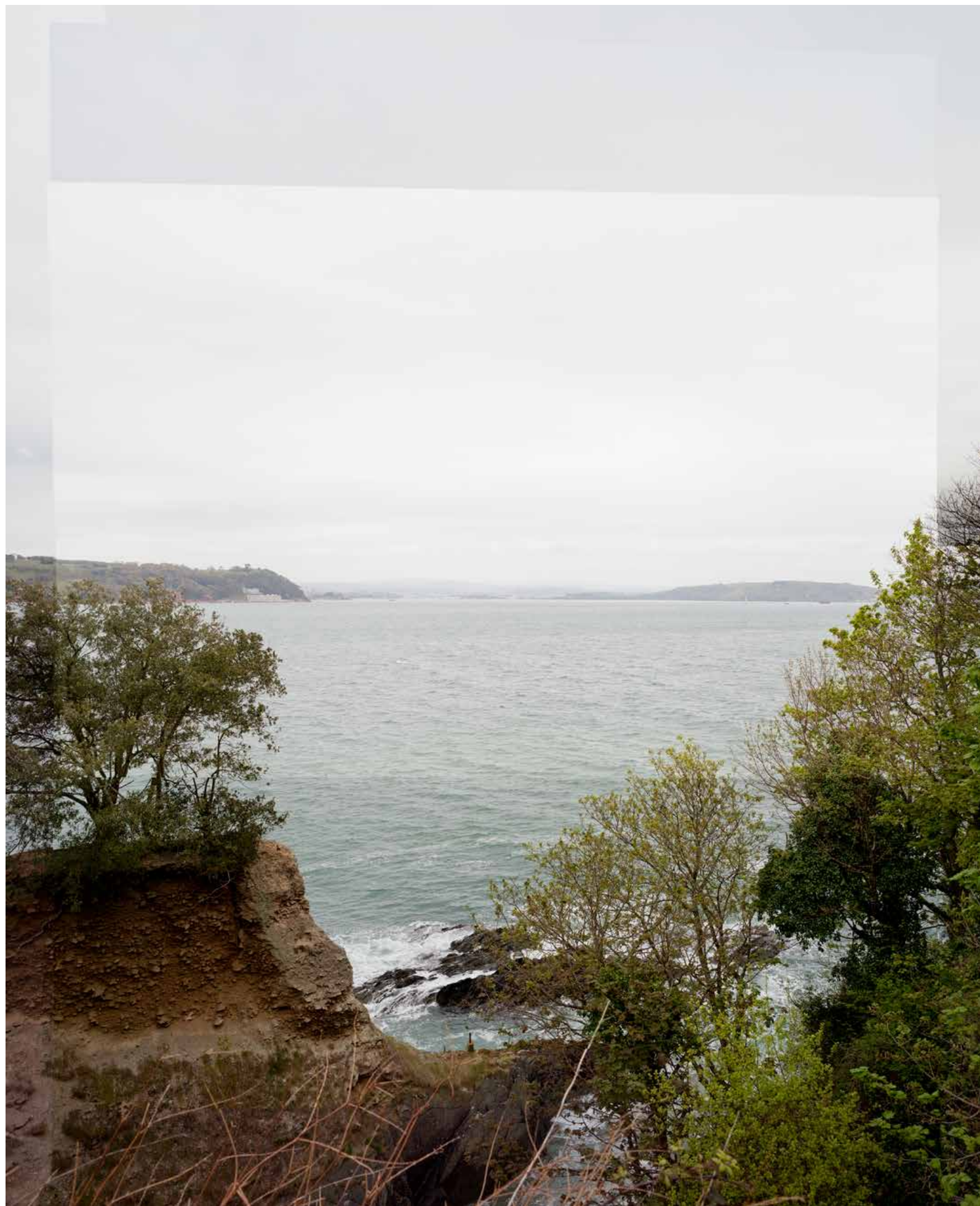
description

times new roman, 1 column: standard description  
univers 55, 3 columns: email conversation  
monospace 821 BT, 2 columns: transcript

footnote

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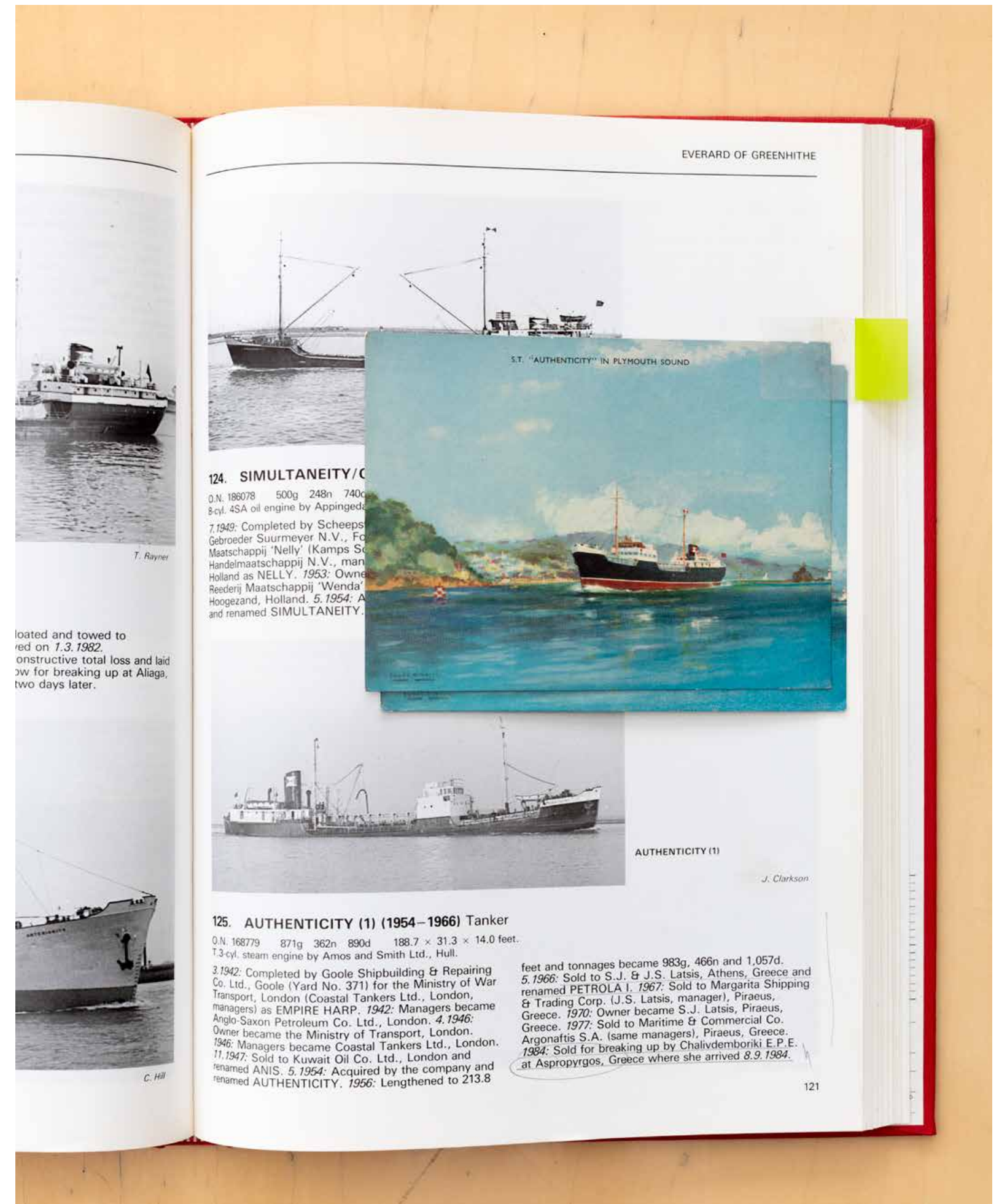
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## AUTHENTICITY IN PLYMOUTH SOUND, POSTCARD

A.132.APC

see next page



## AUTHENTICITY IN PLYMOUTH SOUND, POSTCARD

A.132.APC

SEE ALSO: A.132.(ALL), A.133 CLP Chemaruis, where the Authenticity's position was last received (p. 20-21), A.134 JAD Disappearance of Authenticity (p. 22-23), A.134 KWO Authenticity in Kiel Canal (25.02.2006) (p. 25), A.134 NZK Authenticity, Noordzeekanaal, anno 1983 (p. 26-28), A.135 ACC Letter to the owner of the Authenticity (p. 29), A.135 ASH First sighting of the Authenticity (in front of Harstine Bridge) (p. 30), A.135 AT A Aboard the Authenticity (p. 31-32), 1957 SJB Sant Juan Bautista (scale model) (p. 33), L.463 ESH Mount Egaleo's shadow (p. 49), M.193 SDY Nuclear submarines queuing in Devonport Yard (p. 58-61), M.199 GSW Wreck of the Glen Strathallan (p. 62), R.957 RRR Mount Robson's remarkable resemblance to Nanda Devi (p. 94-95), W.569 FXC Cem. towards building 282, in search of excavation samples (p. 153-154), Y.957 BRE Bridge [Nautical] (p. 171)



Photograph by Peter Fitzpatrick: 'Petrola I - IMO 5031212' - uploaded to shipspotting.com on 25.06.2014 in the category 'scrapyard ships', viewed 12.06.2015. <<http://www.shipspotting.com/gallery/photo.php?lid=2063819>>

The Authenticity – ‘Petrola I’ at the time – at the Chalivdemboriki scrapyard in Aspropyrgos, Greece in 1984.

Goodmorning Michiel,

I have a few more slides taken in that year at Eleusis if you need the images.

The scrapyard in question has now long gone and there are now large warehouses on that plot of land. I was very lucky to have seen Eleusis at that time. It was packed full of ships but now all have gone. It's still a

place of interest and I visit most years. If I can be of any help let me know.

I have a massive shipping-photograph and slide collection of Greek shipping and of shipping in and around Liverpool. Some of my English stuff dates back to the 1940s but my Greek stuff is from 1983.

I will see what other images I have of the scrapyard for you. I'm visiting Greece in

August and have ten days to photograph the shipping there.

I also own a classic tugboat called the Kingston lacy.

Peter

## AUTHENTICITY AT THE SCRAPYARD, ASPROPYRGOS

A.132.ASA

see next page



On 8.9.1984 the Authenticity arrived at the Chalivdemboriki scrapyard in Aspropyrgos. Situated on the coast of the Elefsina Gulf, Aspropyrgos is a Greek port town where numerous scrap- and shipyards used to be. In the neighbouring town of Elefsina the last active scrapyard of the gulf can be found.

## AUTHENTICITY AT THE SCRAPYARD, ASPROPYRGOS

A.132.ASA



Dear Stefanos,

Do you know what happens to the ships that lie in 'troops' of four or five in the bay of Aspropyrgos and the bay of Elefsina?

Kind Regards,  
Michiel.

Good morning from Athens airport,

The ships that are bunked in anchorage area are ships 'laid-up', not in operation, either it was the shipowner's decision because they couldn't find cargo (so running expenses were high without profit) or subject ships have been arrested by banks (loaners) and port authorities due to shipowners debts. So, ships remain there with unknown future, although some of them must be scrapped but nobody undertakes the responsibility and expenses because they don't care. Some good ones are just awaiting a shipping market raise in order to be reactivated.

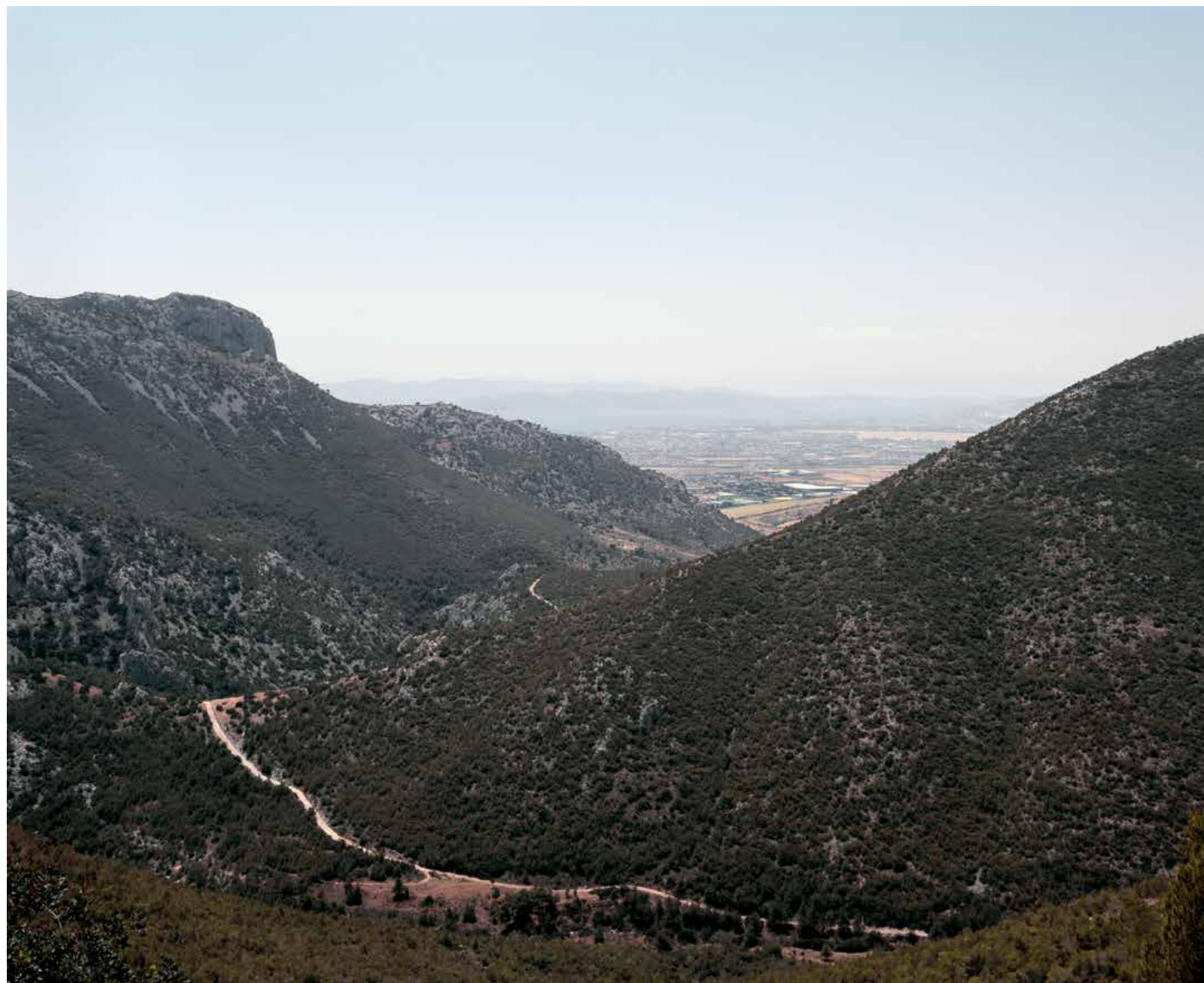
Ready to fly, Stefanos

## SHIPS BUNKED IN ANCHORAGE AREA IN ASPROPYRGOS

A.132.ASD

see next page

Aspropyrgos 38°01'45,17" N 23°34'05,43" E, elevation: 582m, image date: 13.04.2013, viewed: 25.09.2018

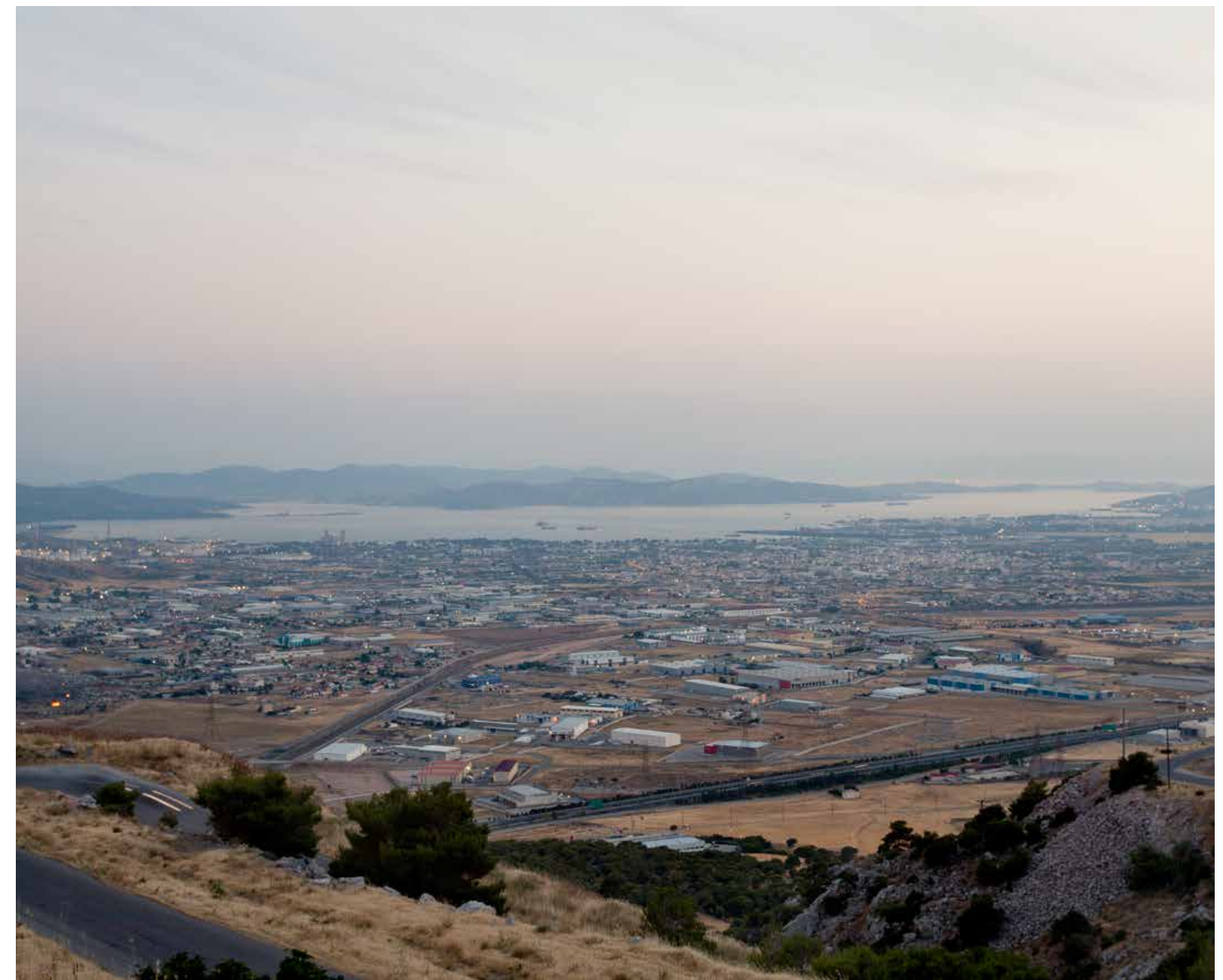


[L12, M12, P12] Laid-up ships bunked in anchorage area, [R12] The former Chalivdemboriki shipyard where the Authenticity was scrapped, [A16] Fire, [I13] A.132.ASF Fishermen In Aspropyrgos, [A13-16, B13-16, C13-16, D13-16, E13-17, F13-17, G13-18, H13-18, I13-18, J13-18, K13-19, L13-19, M13-20, N13-20, O13-21, P13-21, Q13-20, R13-19, S12-19, T12-19, U12-19, V12-18, W12-18, X12-17, Y12-17, Z12-17] The Thriasian Plain, from the foot of the mountain to the edge of the bay.

## SHIPS BUNKED IN ANCHORAGE AREA IN ASPROPYRGOS

A.132.ASD

see next page



[L12, M12, P12] Laid-up ships bunked in anchorage area, [R12] The former Chalivdemboriki shipyard where the Authenticity was scrapped, [A16] Fire, [I13] A.132.ASF Fishermen In Aspropyrgos, [A13-16, B13-16, C13-16, D13-16, E13-17, F13-17, G13-18, H13-18, I13-18, J13-18, K13-19, L13-19, M13-20, N13-20, O13-21, P13-21, Q13-20, R13-19, S12-19, T12-19, U12-19, V12-18, W12-18, X12-17, Y12-17, Z12-17] The Thriasian Plain, from the foot of the mountain to the edge of the bay.

## SHIPS BUNKED IN ANCHORAGE AREA IN ASPROPYRGOS

A.132.ASD

SEE ALSO: A.132.APC Authenticity in Plymouth Sound, postcard (p. 2-3), A.132.ASA Authenticity at the scrapyard, Aspropyrgos (p. 4-5), A.132.ASF Fishermen in Aspropyrgos (p. 10), A.132.ASM Aspropyrgos Bay and the Thriasian Plain, seen from Mount Egaleo (p. 11), A.132.ASR Aspropyrgos refinery (p. 12), A.132.ESM Elefsis shipyard & Mount Egaleo (p. 15), J.1962.CKB Inside the crumbling keel of the Sant Juan Bautista (p. 46), L.463.ILL Traces of logging on Mount Egaleo (p. 50-52), L.769.PAC Port Alberni conversation (p. 53-57), M.193.SDY Nuclear submarines queuing in Devonport Yard (p. 58-61), S.913.CDA Cap d'Antifer, deepwater ouport (p. 108), T.495.PVI Ishinomaki, a panoramic view (p. 110-121), U.699.PFI Penryn, overlooking the experiment, sighting of the fire (p. 140), W.299.BGR Grotto (p. 144)



[W11] Approximate location of the former Chalivdemboriki shipyard where the Authenticity was scrapped.

Four fishermen, a bystander and a family of four look out over the Aspropyrgos Bay with their backs turned to the Thriasian Plain. The plain is bounded by Mount Egaleo to the east, Mount Parnitha to the north, Mount Pateras to the west, and the Elefsina and Aspropyrgos Bay to the south. Today it is a site of concentrated industrial development with cement factories, steel mills, shipyards, scrapyards and oil refineries. In a feud over the ownership of the area between Athena and Poseidon, the latter flooded the plain in wrath.

## FISHERMEN IN ASPROPYRGOS

A.132.ASF



[C15] Mount Egaleo, [F13, G13] Elefsis Shipyard, [P13-14, Q13-14, R13-14, S13-14, T13-14, U13-14] Aspropyrgos Bay, [J13, M13, R13, S13] Laid-up ships bunked in anchorage area, [Q13] The former Chalivdemboriki shipyard where the Authenticity was scrapped, [K13, L13, M13, N12-13, O12-13, P12-13, Q12-13, R12-13, S12-13, T12-13, U12-13, V12-13, W12-13, X12-13, Y12-13, Z12-13] The Thriasian plain.

## ASPROPYRGOS BAY AND THE THRIASIAN PLAIN, SEEN FROM MOUNT EGALEO

A.132.ASM



[L11, O11, P11, W11] Laid-up ships bunked in anchorage area, [V11] The former Chalivdemboriki shipyard where the Authenticity was scrapped.

# ASPROPYRGOS REFINERY

A.132.ASR



# FISHERMEN IN ELEFSINA [ANASTASIA III]

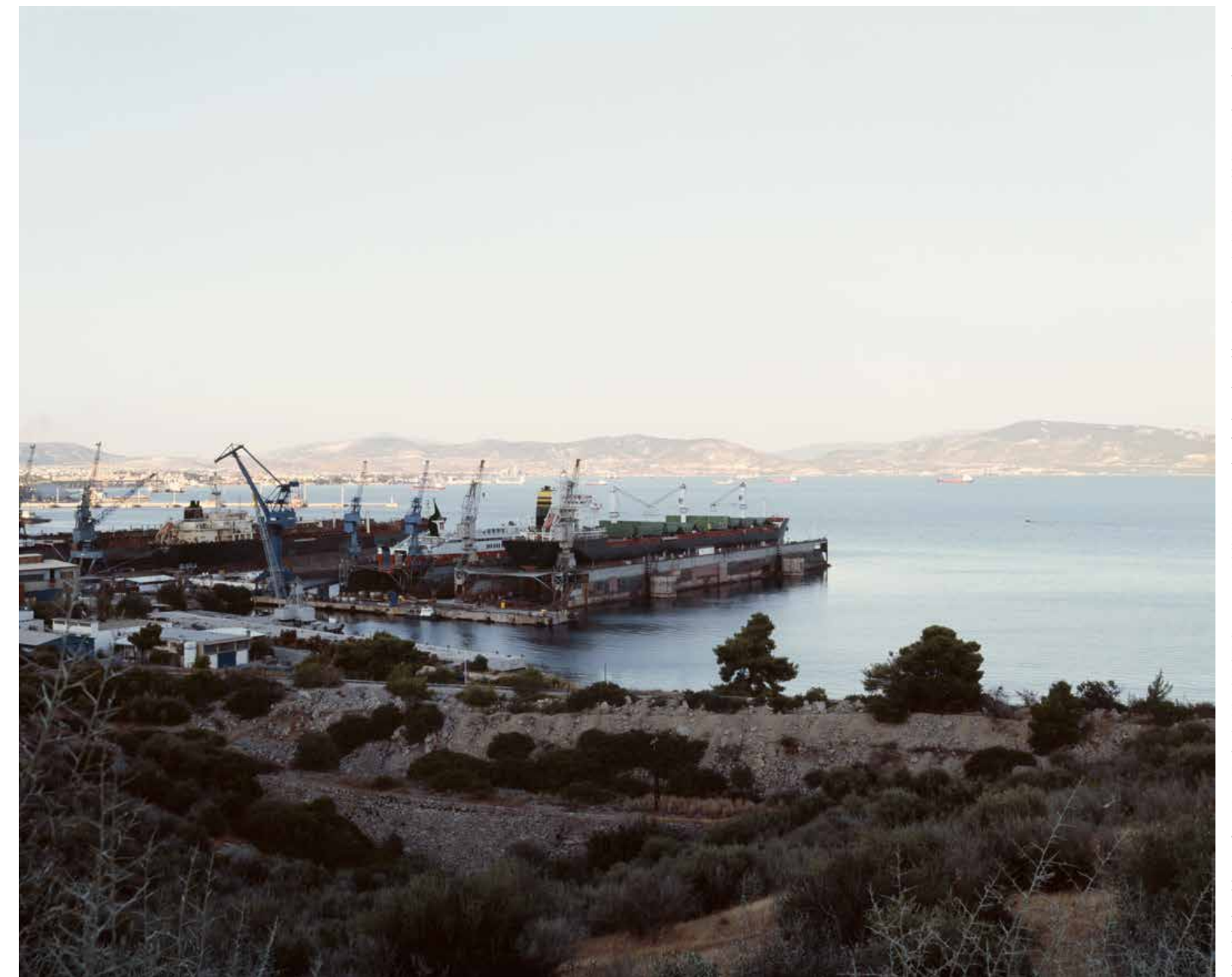
A.132.ELA

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## FISHERMEN IN ELEFSINA [AGIA KIRIAKI]

A.132.ELA

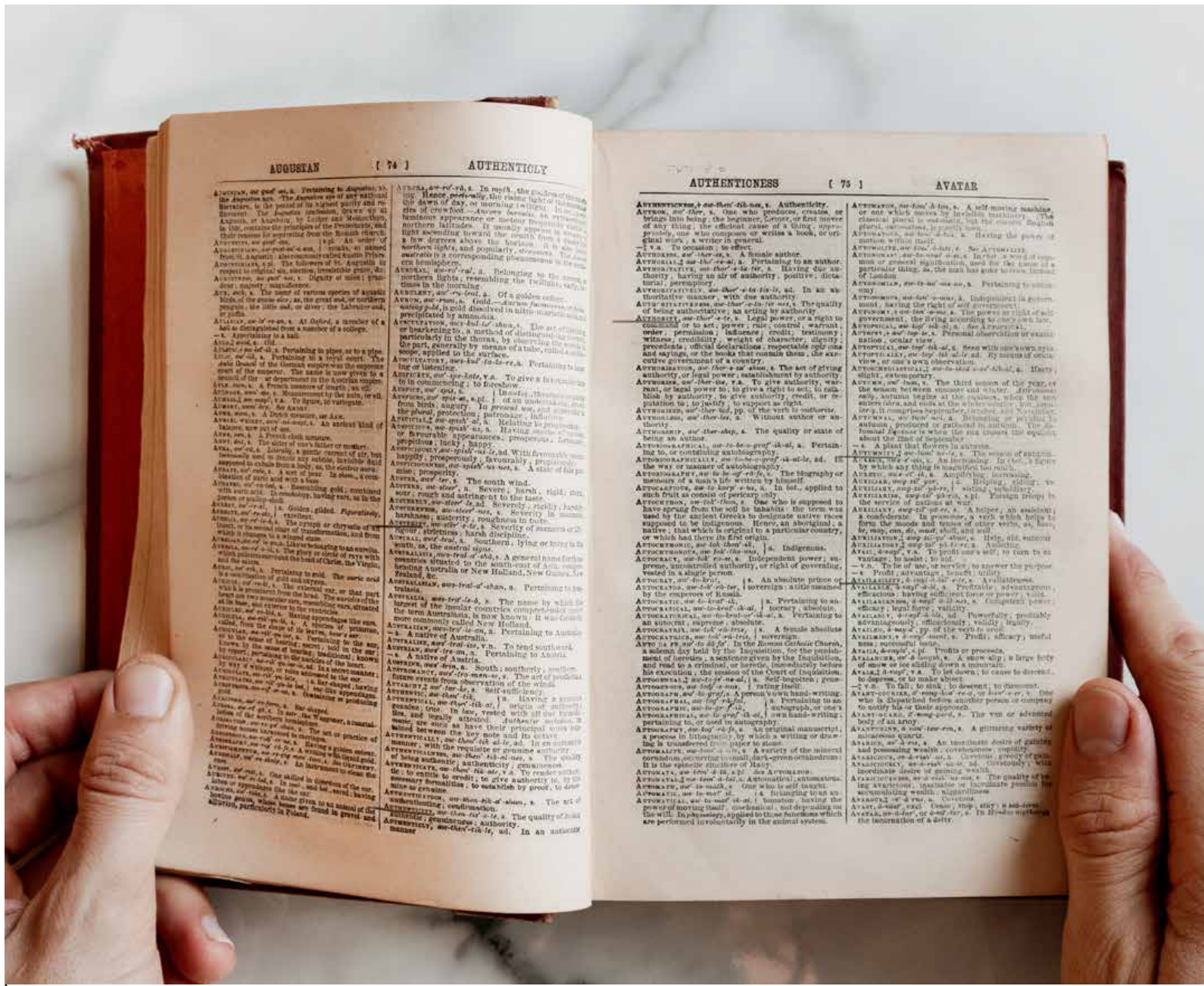


[R11, S11, T10-11, U10-11, V10-11, W10-11, X10-11, Y10-11, Z10-11] Mount Egaleo, [I13] Elefsis shipyard.

## ELEFSIS SHIPYARD & MOUNT EGALEO

A.132.ESM





The names ending in -ITY were originally selected by Miss A.E. Everard – the shipowner’s spouse – from *Nuttals Standard Pronouncing Dictionary* published by F. Warne et Co. circa 1872. The volume had belonged to her mother and is still in existence. Many of the ship names can be seen underlined in pencil.

The choice was confined to S-names for the larger dry cargo ships, C-names for the smaller dry cargo ships and A-names for tankers.

Index of ships owned or managed by F. T. Everard & Sons Limited with names ending in -ITY\*:

Ability<sup>(1)</sup>, Ability<sup>(2)</sup>, Ability<sup>(3)</sup>, Acclivity<sup>(1)</sup>, Acclivity<sup>(2)</sup>, Acclivity<sup>(3)</sup>, Accruity, Acrtity, Activity<sup>(1)</sup>, Activity<sup>(2)</sup>, Actuality<sup>(1)</sup>, Actuality<sup>(2)</sup>, Actuality<sup>(3)</sup>, Actuosity, Acuity, Adaptity<sup>(1)</sup>, Adaptity<sup>(2)</sup>, Adherity, Adroity, Affirmity, Agility<sup>(1)</sup>, Agility<sup>(2)</sup>, Agility<sup>(3)</sup>, Akinity, Alacrity<sup>(1)</sup>, Alacrity<sup>(2)</sup>, Alacrity<sup>(3)</sup>, Alignity, Allegrity, Allurity<sup>(1)</sup>, Allurity<sup>(2)</sup>, Amenity<sup>(1)</sup>, Amenity<sup>(2)</sup>, Amenity<sup>(3)</sup>, Amity<sup>(1)</sup>, Amity<sup>(2)</sup>, Amity<sup>(3)</sup>, Angularity<sup>(1)</sup>, Angularity<sup>(2)</sup>, Annuity<sup>(1)</sup>,

Annuity<sup>(2)</sup>, Anonity<sup>(1)</sup>, Anonity<sup>(2)</sup>, Anteriority<sup>(1)</sup>, Anteriority<sup>(2)</sup>, Antiquity, Apexity, Apricity<sup>(1)</sup>, Apricity<sup>(2)</sup>, Aptity, Aqueity<sup>(1)</sup>, Aqueity<sup>(2)</sup>, Aqueity<sup>(3)</sup>, Arduity<sup>(1)</sup>, Arduity<sup>(2)</sup>, Arduity<sup>(3)</sup>, Asperity<sup>(1)</sup>, Asperity<sup>(2)</sup>, Asperity<sup>(3)</sup>, Assiduity<sup>(1)</sup>, Assiduity<sup>(2)</sup>, Assurity<sup>(1)</sup>, Assurity<sup>(2)</sup>, Astrality<sup>(1)</sup>, Astrality<sup>(2)</sup>, Atomicity, Atonality, Attunity, Aureity, Auspicity, Austerity, Austlity, AUTHENTICITY<sup>(1)</sup>, AUTHENTICITY<sup>(2)</sup>, AUTHENTICITY<sup>(3)</sup>, Authority<sup>(1)</sup>, Authority<sup>(2)</sup>, Averty<sup>(1)</sup>, Averty<sup>(2)</sup>, Awardity, Azurity, Candourity<sup>(1)</sup>, Candourity<sup>(2)</sup>, Capacity<sup>(1)</sup>,

Capacity<sup>(2)</sup>, Capacity<sup>(3)</sup>, Celebrity<sup>(1)</sup>, Celebrity<sup>(2)</sup>, Centricity, Centurity, City<sup>(1)</sup>, City<sup>(2)</sup>, Clarity, Clarity, Comity<sup>(1)</sup>, Comity<sup>(2)</sup>, Comity<sup>(3)</sup>, Commodity<sup>(1)</sup>, Commodity<sup>(2)</sup>, Conformity<sup>(1)</sup>, Conformity<sup>(2)</sup>, Continuity, Empire Tigity, Festivity<sup>(1)</sup>, Festivity<sup>(2)</sup>, Firmity, Fixity<sup>(1)</sup>, Fixity<sup>(2)</sup>, Flexity, Fluidity, Formality<sup>(1)</sup>, Formality<sup>(2)</sup>, Fortunity, Frivolity<sup>(1)</sup>, Frivolity<sup>(2)</sup>, Futurity<sup>(1)</sup>, Futurity<sup>(2)</sup>, Sagacity<sup>(1)</sup>, Sagacity<sup>(2)</sup>, Sagacity<sup>(3)</sup>, Sanguity<sup>(1)</sup>, Sanguity<sup>(2)</sup>, Scarcity, Security<sup>(1)</sup>, Security<sup>(2)</sup>, Sedulity, Selectivity<sup>(1)</sup>, Selectivity<sup>(2)</sup>, Seniority<sup>(1)</sup>, Seniority<sup>(2)</sup>, Seniority<sup>(3)</sup>, Sequacity, Serenity<sup>(1)</sup>, Serenity<sup>(2)</sup>,

Serenity<sup>(3)</sup>, Seriality, Severity, Signality, Similarity, Simultaneity, Sincerity<sup>(1)</sup>, Sincerity<sup>(2)</sup>, Singularity<sup>(1)</sup>, Singularity<sup>(2)</sup>, Sociality<sup>(1)</sup>, Sociality<sup>(2)</sup>, Sodality, Solidarity<sup>(1)</sup>, Conformity<sup>(2)</sup>, Continuity, Speciality<sup>(1)</sup>, Speciality<sup>(2)</sup>, Spirality, Spontaneity, Stability<sup>(1)</sup>, Stability<sup>(2)</sup>, Suavity<sup>(1)</sup>, Suavity<sup>(2)</sup>, Suavity<sup>(3)</sup>, Summity<sup>(1)</sup>, Summity<sup>(2)</sup>, Superiority<sup>(1)</sup>, Superiority<sup>(2)</sup>, Superiority<sup>(3)</sup>, Supremity<sup>(1)</sup>, Supremity<sup>(2)</sup>, Supremity<sup>(3)</sup>, Tankity, Totality

\*source: GARRETT, K. S., Everard Of Greenhithe, The World Ship Society, Kendal, 1991

# THE NAMES ENDING IN -ITY



5.10.2008, 13:08  
Michael Parkes (Senior Member) posts the following on the shipsnostalgia.com-forum:

'Back in the 1950s and 60s I always thought that Thameshaven and Shellhaven were two separate places. I understood that Thameshaven was for storage and Shellhaven was a refinery.

Although I joined ships at these places, my very first tanker was Fred Everards Authenticity, a small coastal tanker carrying refined products and we were next door at Coryton of which I believe is also or was a refinery.

Could somebody enlighten me please.'

Dear Mr. Parkes,

I am a Belgian photographer making a documentary about the Authenticity (my starting point is a postcard by Frank H. Mason of the Authenticity in Plymouth Sound). In a message from 2008 on this forum, you mentioned that you worked aboard the Authenticity. Could I ask you some questions about your time aboard this ship?

All the best,  
Michiel De Cleene.

Dear Michiel,

I was on this vessel for only two weeks from 16 June 1958 until 1 July 1958. I joined Authenticity when I left school as a Catering Boy aged 15.

The detail of Authenticity's movements during this short period, was:

Coryton  
Poole  
Plymouth  
Coryton  
Sunderland  
Coryton  
Kings Lynn  
Coryton.

I very much remember that my cabin was one of two below decks. I was on the starboard side located between the engine room and the steering gear compartment.

# TWO WEEKS ABOARD THE AUTHENTICITY



This was very noisy as the ships generator in the engine room was almost against my cabin bulkhead.

On returning to Coryton, I paid off and went to the shipping pool at Tilbury and then told the officer that I joined the Merchant Navy to see the world and not Sunderland.

My next ship was the Hain Steamship Company vessel Trelawny. Many months later, I returned home.

Regards,  
Michael.

Dear Mr. Parkes,  
Dear Michael,

thank you for your swift response. It is great to finally hear from someone who has been aboard the Authenticity.

Do you, by any chance, have anything relating to your short time aboard this ship? Photographs, a logbook, a diary, documents...? These could be a great addition to the documentary.

Some information about the project: I am making a photographic documentary on every ship named 'Authenticity'.

As I mentioned, my search for ships named Authenticity started with a postcard by the painter Frank H. Mason of the Authenticity in Plymouth Sound, UK. I have retraced the painter's steps and have found what I believe to be the exact location from which he made his painting. In finding

and photographing this place, I discovered Mr. Mason wasn't too keen on representing the landscape correctly: in order to make the landscape more recognizable he shifted some of the better known landmarks closer together – he made a faulty landscape that looks more like Plymouth than Plymouth itself.

I was pleasantly surprised to see that in your short time aboard, the Authenticity was also in Plymouth.

Further research led me to the Chalivdemboriki shipyard in Aspropyrgos, Greece where this particular ship was scrapped in 1984. The shipyard is now long gone, but the landscape – the mythological Thriasian Plain – still shows traces of the former shipbreaking industry. As you know, the Authenticity depicted on the postcard belonged to Everard of Greenhithe, a shipping company that is – among other things – known for its fleet of ships with

## TWO WEEKS ABOARD THE AUTHENTICITY

A.132.MPC

see next page

7 CERTIFICATES				8 OF DISCHARGE			
Compiled from Lists of Crew and Official and Copy of Report of Character				Log Books or from other Official Records, if desired by the Seaman.			
No.	*Name of ship and official number, and tonnage.†	Date and place of Engagement* Discharge		*Rating	Description of voyage	Copy of Report of Character For ability For general conduct	Signature of (1) Master; and of (2) officer and official stamp
1	B.S. AUTHENTICITY 168779 LONDON G.T. 983 L.T. 466	Tilbury 16 JUN 1958	Tilbury 1 JUL 1958	Cat Boy	H.T.	Very Good	(1) [Signature] (2) E.N.G. 2
2	M.V. [unclear] P.O.R. 1 G.R.T. 5414-85 N.R.T. 2958-16 H.P. 8800	Tilbury 15 JUL 1958	Tilbury 21 JAN 1959	Cat Boy	Fen.	VERY GOOD 47	(1) [Signature] (2) [Signature] LEITH
3	M. V. ATHELKING LIVERPOOL O.N. 183757 N.R.T. 6515.89 G.R.T. 11182.62 H.P. 5300	Tilbury 17 FEB 1959	Cardiff 5.5.59	Cat Boy	Ygn.	Decline to Report	(1) [Signature] (2) [Signature] LEITH
4	M. V. RAMBLER ROSE OFF. No. 163694 PORT REG. SWANSEA G.R.T. 1422.56 N.R.T. 698.52	Tilbury 26 JUN 1959	Swansea 6 AUG 1959	Cat Boy	H.T.	VERY GOOD 151	(1) [Signature] (2) [Signature]
5	M.V. [unclear] CARDIFF O.N. 185917 N.R.T. 2922.58 G.T. 5149.65	Tilbury 28/8/59	Liverpool - ASEP 1959	Cat Boy	Ygn.	VERY GOOD 76	(1) [Signature] (2) [Signature] LIVERPOOL
6	M/V WORCESTERBROOK ST 1022 NR 566	London 18.9.59	Bristol 22 OCT 1959	Cat Boy	H.T.	VERY GOOD 98	(1) [Signature] (2) [Signature] BRISTOL

Scan by Michael Parkes: 'Seaman's discharge book, 1958', received by email on 04.01.2018

names ending in -ITY. This enterprise had not one, but two Authenticities, the second one of those was sold to a bunkering company in Panama.

The third Authenticity I have found, was signalled in the Canadian town Chemainus. I went there in July to search for this ship (or traces of it) only to find it was no longer there, leaving me with no other option than to photograph the landscape where the Authenticity was signalled for the last time. I found the fourth Authenticity near Olympia, USA. I sent the owners a letter and following some correspondence, I went to visit them and photographed their boat last summer. I will attach some of the photographs I have made to this email. As I already mentioned it is great to hear from someone who worked aboard the vessel this whole documentary started with. It would be great to hear more stories about the two weeks you spent working aboard this ship. I was wondering how you still remember so sharply which places the ship visited during these two weeks? Did you keep a record of it or do you simply remember it? Or is it a

very logical itinerary? What does a catering boy do? Have you been at sea for the rest of your career? Have you ever seen the Authenticity again?

All the best and thank you,  
Michiel.

Dear Michiel,

Hoping this folder gets through to you, please find attached files of photographs of Authenticity that I have downloaded from the net. I did not have a camera in those days.

Also in the files are two copies of pages from my seaman's discharge book which places me on the Authenticity's crew way back in 1958.

Regards,  
Michael.

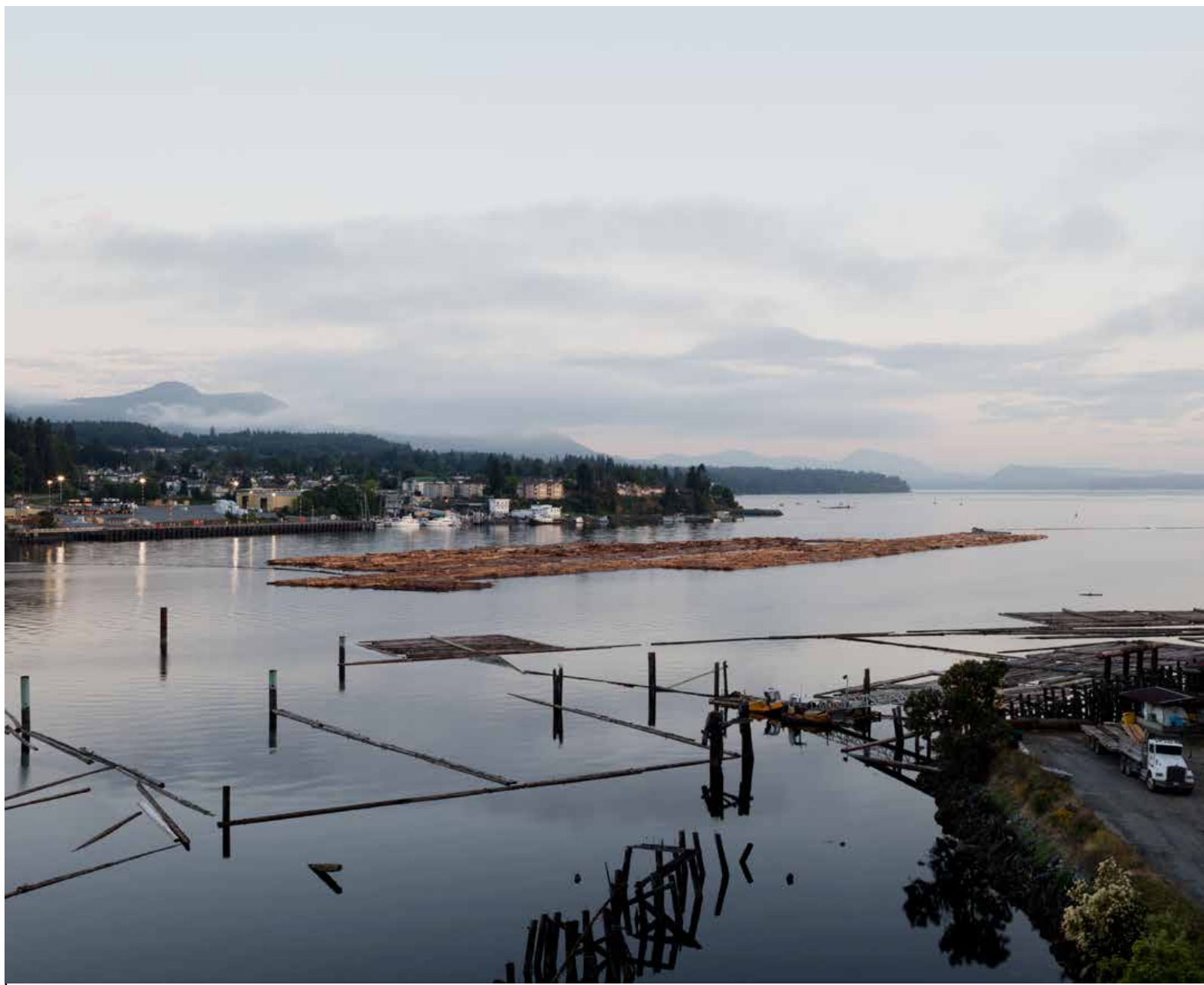
## TWO WEEKS ABOARD THE AUTHENTICITY

A.132.MPC

Sant Juan Bautista (p. 46), J.973.L.P.L. Lumber in the parking lot of the Sant Juan Bautista Museum (p. 48), L.769.PAC Port Alberni conversation (p. 53-57), M.199.RBO Boeing 737 artificial reef, Chemainus (p. 63-64), Y.359.CU UFO sighting in Chemainus (p. 162-164)

the owner of the Authenticity (p. 29), A.135.ASH First sighting of the Authenticity (in front of Harstine Bridge) (p. 30), A.135.ATA Aboard the Authenticity (p. 31-32), J.957.SJB Sant Juan Bautista (scale model) (p. 33), J.957.SJR The restored masts of the Sant Juan Bautista (replica) (p. 34), J.958.TFL TFL 44 (the restored masts of the Sant Juan Bautista) (p. 35-40), J.962.CKB Inside the crumbling keel of the

SEE ALSO: A.132.AFC Authenticity in Plymouth Sound, postcard (p. 2-3), A.132.ITV The names ending in -ITY (p. 16), A.132.MPC Two weeks aboard the Authenticity (p. 17-19), A.134.IAD Disappearance of Authenticity (p. 22-23), A.134.KWO Authenticity in Kiel Canal (25.02.2006) (p. 25), A.134.NZK Authenticity, Noordzeekanaal, anno 1983 (p. 26-28), A.135.ACC Letter to



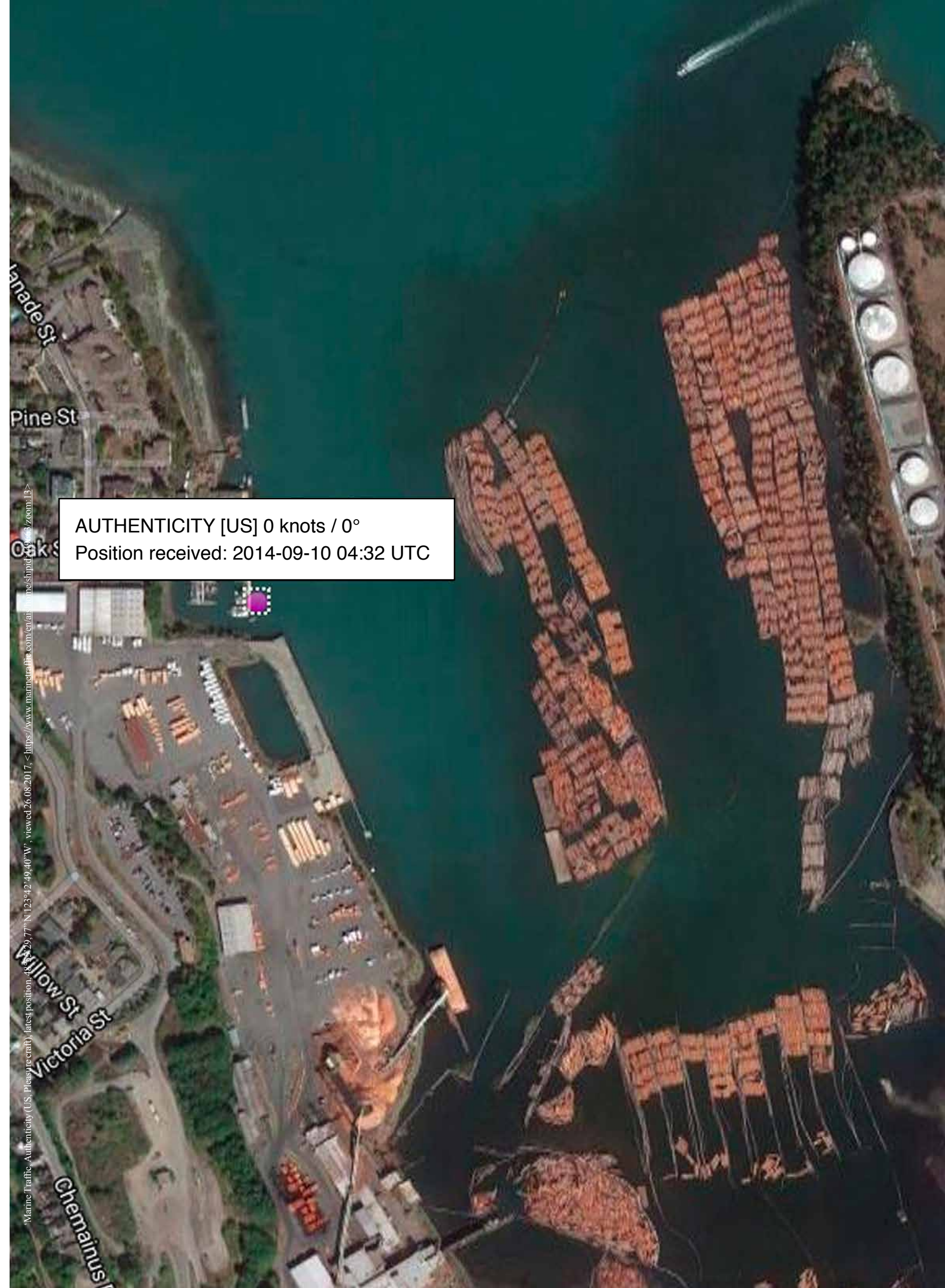
[C12] Chemainus mill (Western Forest Products), [J12] last signalled position of the Authenticity, [N13] debarked logs waiting to be processed.

In September 2014 the AIS-transponder\* signalled the Authenticity in Chemainus, Canada, in the harbour next to the mill. Afterwards no positions were received. When the photograph was taken, the Authenticity was nowhere to be seen.

\* Automatic Identification System

# CHEMAINUS, WHERE THE AUTHENTICITY'S POSITION WAS LAST RECEIVED

A.133.CLP



AUTHENTICITY [US] 0 knots / 0°  
Position received: 2014-09-10 04:32 UTC

\*Marine Traffic: Authenticity (US, Pleasure craft) latest position: 46° 46' 29.77" N 123° 42' 49.40" W, viewed: 36.08.2017, < <https://www.marinetraffic.com/en/#!shiplist:4966/zoom:13>



Marine Traffic - Authenticity (Caribe Trader, PA), latest position, 09°01'40.71"N 79°38'18.59"W, viewed 14.02.2015, <http://www.marinetraffic.com/en/ais/home/centerx:79.6363/centery:9.0342/zoom:8/mmsi:36753000/shiptid:419274>

Webcam Gatun Locks, Panama Canal, viewed 24.03.2015, <http://www.panacanal.com/common/multimedia/webcams/viewer-flash/cam-gatun-hi.html>



The Authenticity bunkered crude fuel in the Panama Bay. She navigated back and forth between the artificial island Isla Melones and ships leaving or waiting to enter the Panama Canal. On February 14th 2015 she had been moored for a couple of days near the Centennial bridge when the AIS-transponder momentarily signalled the ship's position in the woods of the Bosque Protector de Arraiján. Afterwards no signal of the ship was received for 41 days, until she reappeared near the port of Bahia Las Minas, at the other side of the Panama Canal.

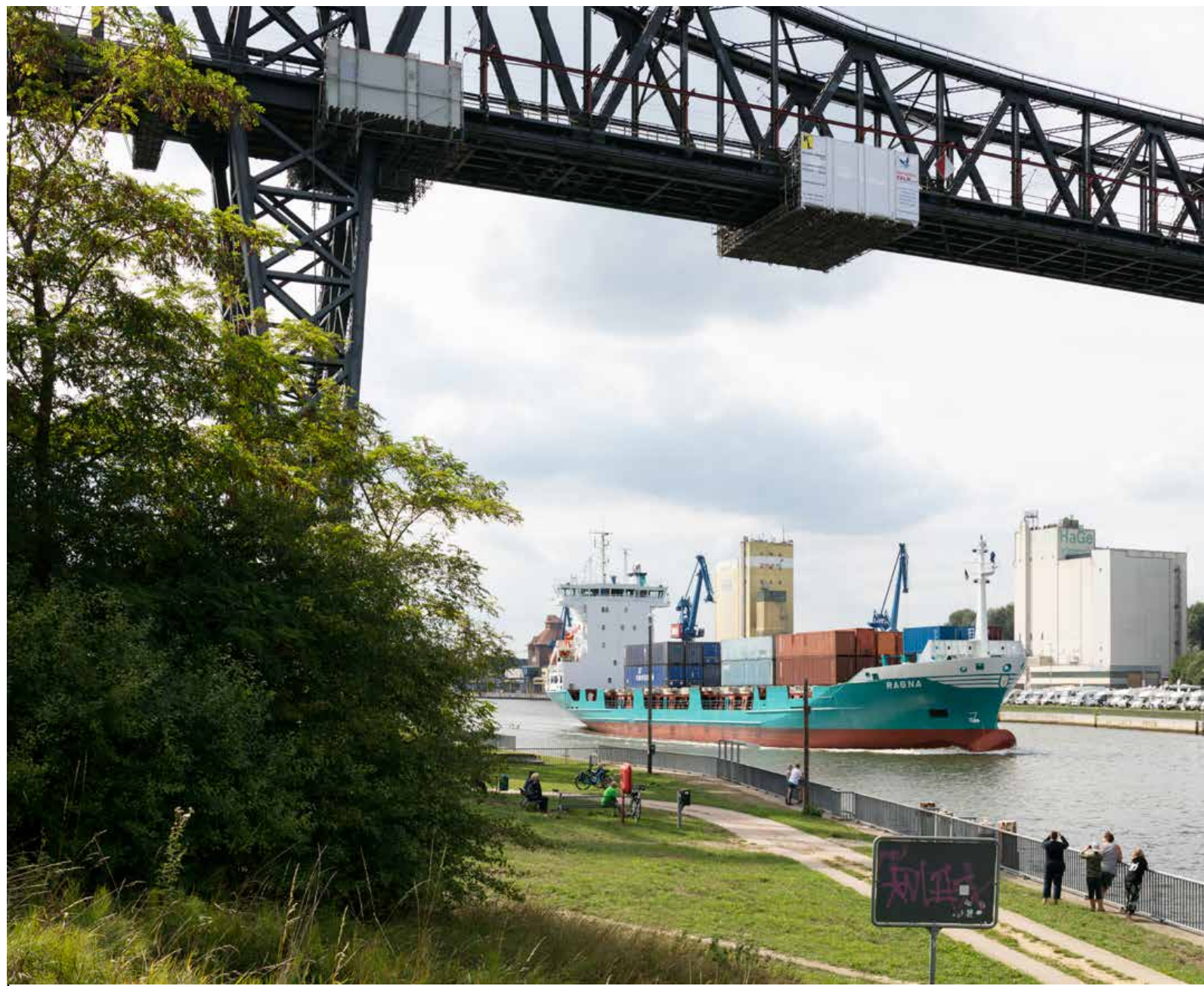
On March 23th 2015, a high pressure system above Panama Bay blew strong winds landwards. At the Gatun locks, one of the webcams overlooking the Canal neglected the traffic and briefly captured its own images. The ship's presumed passage through the Gatun locks wasn't recorded by this camera and the AIS-transponder did not save any data of the ship's transit from the Pacific to the Atlantic side of the canal: the Authenticity managed to swap oceans undetected.

On February 16th 2016, the transponder still signals the ship near the port of Bahia Las Minas. The current is calm, the ship has been practically immobile for a year.

## DISAPPEARANCE OF AUTHENTICITY

A.134.JAD

see next page



On the other bank an elderly man announces every passing ship through a PA-system. Two minutes in advance, he mentions the type of vessel, the build year, the gross tonnage and the flag the ship sails under. When a ship comes by he greets it and wishes the ship and crew a smooth sailing and fair winds. Afterwards, he plays the corresponding national anthem.

The man has no distinct memory of the Authenticity passing by on the twenty-fifth of February 2006.

## SHIPSPOTTERS AT KIEL CANAL

A.134.KSB



## AUTHENTICITY IN KIEL CANAL [25.02.2006]

A.134.KWO



Photograph by Pieter Inpijn: 'Authenticity - IMO 7715422', uploaded to shipspotting.com on 15.11.2017, viewed 17.11.2017, <<http://www.shipspotting.com/gallery/photo.php?lid=2768598#>>

Dear Mr. Inpijn,\*

For the last two years I have been working on a documentary about every ship or boat named Authenticity. I started from various sources, ranging from postcards, to AIS-data, to images from websites such as shipspotting.com. Today I saw that you recently put a picture of the Authenticity (dated June 1983) on that website.

I am not only interested in the ship itself, but also in the places where the Authenticity appears / appeared. Could you tell me where this photograph was taken? I see in the accompanying data that it is in the Noordzeekanaal, near Velsen. But I wonder where exactly. I see that you have taken an elevated position, is this a bridge or another height in the landscape?

Did you only make that one photo or are there multiple exposures of this specific moment? I am also very curious about the rest of your – extensive – collection.

As an attachment I send you a part of my search for the ship (and all namesakes).

Greetings and thanks for your help,  
Michiel De Cleene

Dear mr. De Cleene,

At the time I was coming from Bergen in Norway and was sailing through the Noordzeekanaal on the way to Amsterdam. I took the photo from the deck of the ferry Venus of the Fred Olsen Lines. That's the reason for the high position: on that particular ship you could stand right next to the bridge.

The photo was taken with a cheap camera and I now find, in the digital age, it is of poor quality but in the eighties you didn't know any better.

At that time I took only one picture of the Authenticity, more or less to complete the roll of film at the end of the holiday. Now that 35 years have passed, the location is not entirely clear to me: it has to be somewhere along the Noordzeekanaal and – considering the background and the trees – I reckon somewhere between the Velsers Tunnel and the ferry at Buitenhuisen, because after that it becomes an industrial area.

Kind regards,  
Pieter Inpijn

Dear Mr. Inpijn,

Thank you for your swift response. I had not considered the possibility of another ship as an explanation for the elevated point of view.

I noticed that during the last days you have uploaded an enormous amount of images on shipspotting.com, I have not yet seen them all, but there are some fantastic pictures among them (for instance 'Sodervon M-79-VN', according to the description a Norwegian photograph made in June 1983). May I ask why you are sharing so many images now? Furthermore, I also wonder what used to be (and perhaps still is) the motif to make all these images? Did you always have the idea to share them or was it originally conceived as a personal collection?

All the best,  
Michiel.

\* email conversation in Dutch, translated

## AUTHENTICITY, NOORDZEEKANAAL, ANNO 1983

A.134.NZK

see next page



Photograph by Pieter Inpijn: 'Sodervon M-79-VN', uploaded to shipspotting.com on 15.11.2017, viewed 17.11.2017, <<http://www.shipspotting.com/gallery/photo.php?lid=2768534#>>

Hi,

These pictures date back to the eighties and are the result of my summer holidays in Scandinavia. Making pictures of ships has always been my hobby. Travelling around during the holidays allowed me to see something else than the ships in the Dutch ports. Back then, it was a personal collection, but I was also a member of associations and clubs, with monthly trade-shows where members could exchange photos. As there are stamp collectors, there are also shipping-collectors and even monthly magazines specifically about tugs or ferries or shipping in general. Unfortunately, the internet has ended all that because now everything is available for free. The fact that I am now putting everything online is simply because I am retired and have nothing else to do. These photographs are gathering dust in a cupboard and through the internet someone else can still see them. Forty years ago, the internet did not exist and no one had a computer at home. I could never have imagined my photographs being seen all over the world.

Kind regards,  
Pieter Inpijn

Dear Mr. Inpijn,

First and foremost I wish you all the best for the new year. I very much look forward to seeing your new photographs on shipspotting.com from time to time. Meanwhile I am still working on the documentary about the Authenticity. Among other things I am trying to get in touch with people who have worked aboard the ship, but that doesn't prove to be easy.

I am still interested in your experience regarding the development and management of a personal archive of photographs, could you expand a bit on this?

Chances are I will publish a book about the Authenticity, among other things, and I wondered if the picture you took of the ship could be included in the book, with the correct credits, of course. Could you let me know if this is something you would agree to?

All the best and thank you in advance,  
Michiel.

Dear Sir,

You have my permission to use the photograph for publication.

About my collection: I am now 62 years old and started photographing ships when I was about 20 years old. That simply came from an interest in ships, as someone else plays football or collects cigar bands. It was only much later that I found out that there are more people with the same interest and even associations. So this was only to keep myself busy instead of hanging in front of the television. Photos were also exchanged by post; from the Mediterranean, for example, because those ships did not come here. I also spent my holidays looking at ships abroad instead of lying on the beach, because that's something I can do in the Netherlands.

I also wrote articles for magazines for those hobbyist associations. I now have a large collection but I am just a small boy in the Netherlands, for example: in Germany I know people with more than 100,000 photos of ferries and in the USA people with more than 100,000 photos of nothing else than tugboats. My photos ended up in albums, ordered by the number of the film with the technical

## AUTHENTICITY, NOORDZEEKANAAL, ANNO 1983 [SODERVON M-79-VN]

A.134.NZK

see next page

data and, if possible, the ship's life course. At the time you'd get that from scarce books, today there's an abundance of information on the internet. In addition, I kept a database on my computer of every ship's name and the accompanying film- and negative-number, in order to be able to find it. That's where it stopped for me: cabinets full of albums, ordered by number of film and by year. And a small computer file. Now that everything is going digital, I still do that, but I am looking for the data via the internet. Now that I am no longer working, I am putting all my good photographs through the scanner and I put them on the internet. What I am publishing on the internet now, is barely a third of what I have, because too light / too dark / too far away / etc. doesn't stand a chance of being published online. It must be qualitative. And in doing so someone else might see some photographs of mine from the last century or from regions that haven't been photographed extensively such as Norway and Sweden.

I would like to leave it at this.  
Kind regards,  
Pieter Inpijn

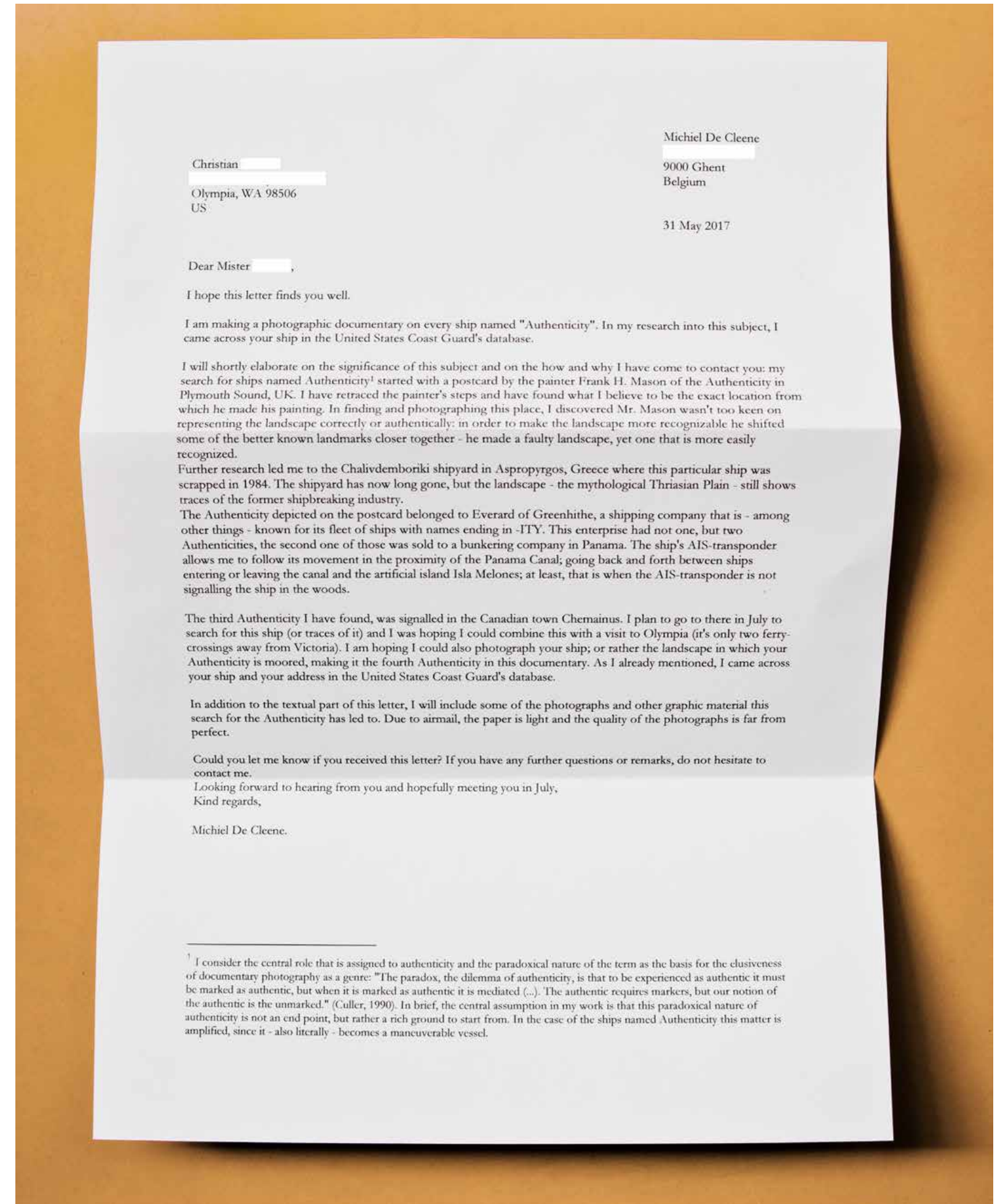
Dear Mr. Inpijn,

Thank you very much for your reply and for your permission to publish your photograph.

Kind regards and thank you,  
Michiel.

# AUTHENTICITY, NOORDZEEKANAAL, ANNO 1983

A.134.NZK



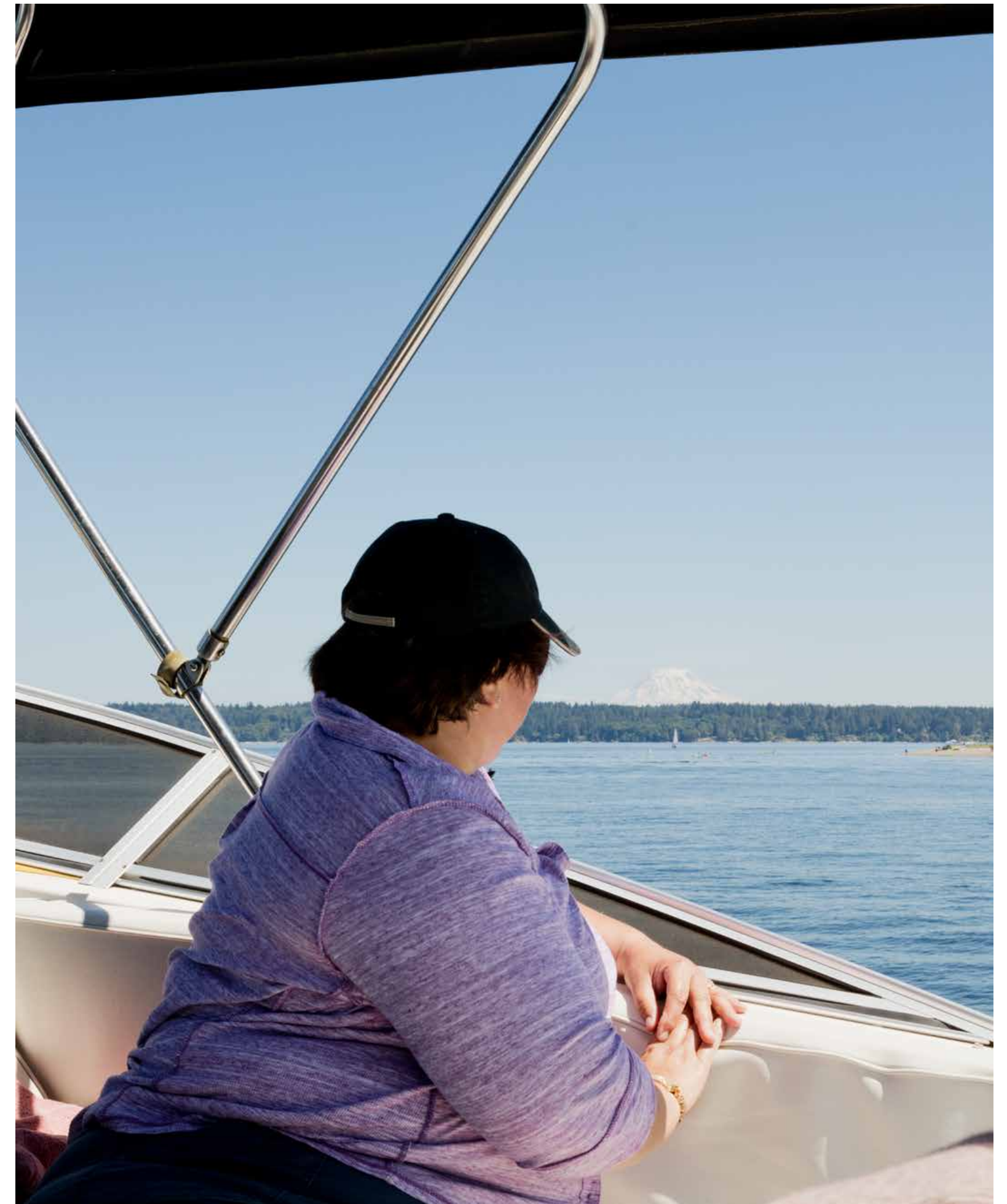
# LETTER TO THE OWNER OF THE AUTHENTICITY

A.135.ACC



# FIRST SIGHTING OF THE AUTHENTICITY [IN FRONT OF HARSTINE BRIDGE]

A.135.ASH



# ABOARD THE AUTHENTICITY

A.135.ATA

see next page





Cher Michiel,  
Hello, thanks for your fascinating letter and description of your project!

My husband Chris and I are very eager to help you, however, we want to be certain that you know our boat is only 17 metres – not a ship. You might like, though, the coincidence that our tender is a Caribe named AudaciTY. If you wanted to meet us on Sunday, July 2nd p.m., we could spend

the afternoon with you, finding picturesque backdrops... we have a little inflatable and a drone, so we between us, we should be set for some good shots! Thinking of going up to Quartermaster Harbor across from Tacoma (that has majestic Mount Rainier\* behind it) for a couple of nights... the Narrows Bridge in Tacoma is another option for a dramatic setting... but it will likely be crazy (as it's a phenomenal setting for fireworks).

Looking forward to hearing from you further and meeting you, and thank you for writing us,

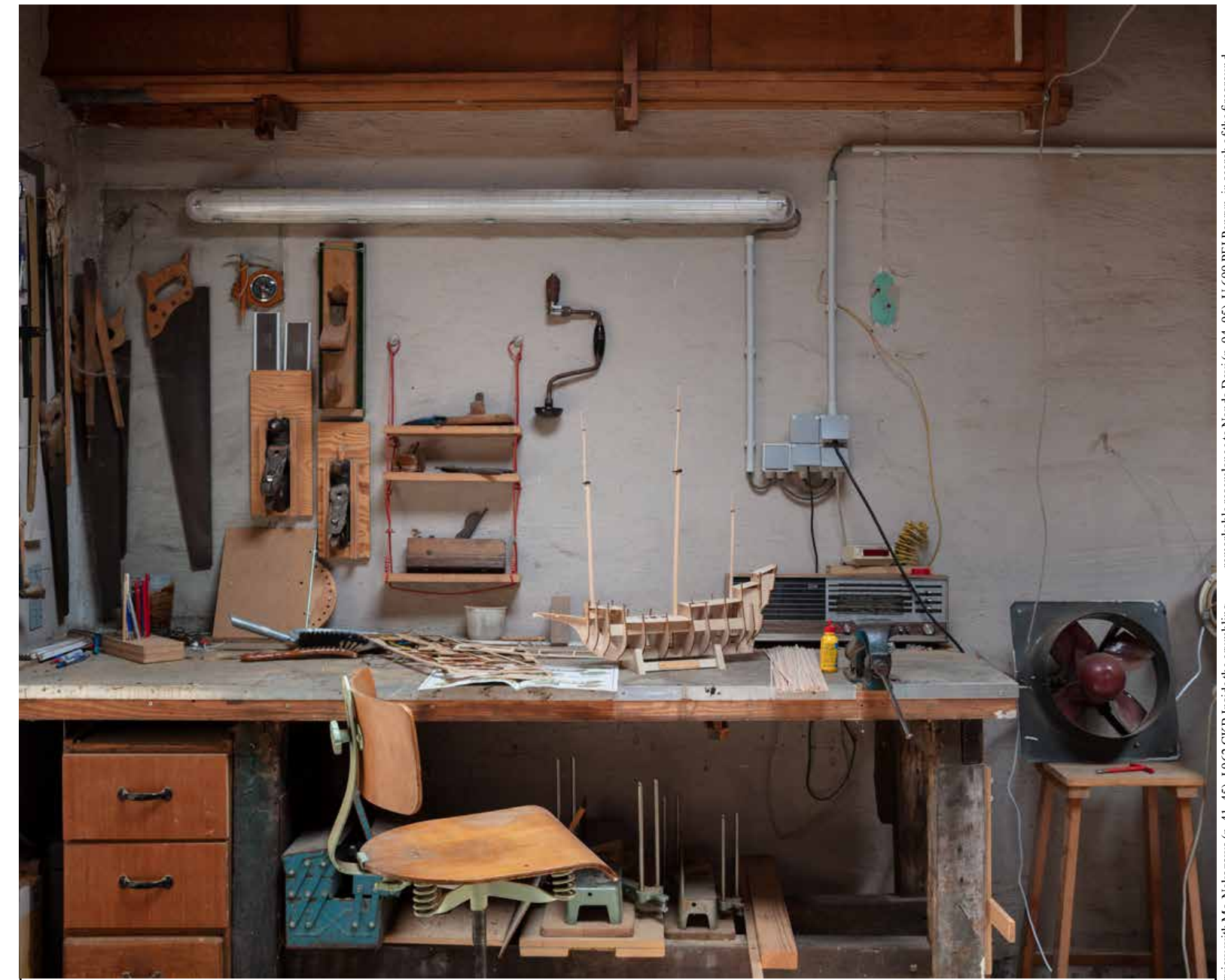
Andrea

P.S.: Ironically, one of my closest friends lives in Chemainus (I am originally from Victoria – and have lots of Belgian roots).

\* [ < Previous page P20, Q19-20, R19-20, S19-20, T20 ]

## ABOARD THE AUTHENTICITY

A.135.ATA



‘The kit is a faithful reproduction of the Sant Juan Bautista. Scaled down to 1/80 and in total sail state. The scale model is based on actual ship data taken from the 1993 replica (scale 1/1) on show in Ishinomaki, Japan.

It is easy to assemble the keel frame hull. For all the outer panels and deck material hinoki materials were used. The curved shape of the bow and the ship’s sides are easy to bend and are highly accurate. The kit is composed mainly of wooden laser-processed parts, along with etched metal parts, soft metal and cloth sail, to faithfully reproduce the actual ship. It is an easy-to-assemble kit with color instructions.

In 1613, the Sant Juan Bautista crossed the Pacific for trade negotiations with Spain. According to the historical documents of the time, the ship was built by 800 shipwrights, 700 blacksmiths and 3000 carpenters in about fifty-four days.’\*

\* Translated excerpt taken from the scale model’s box: ‘1/80 Sant Juan Bautista’ by Woody Joe

## SANT JUAN BAUTISTA [SCALE MODEL]

J.957.SJB

SEE ALSO: A.132.ESM. Eusebio's shipyard & Mount Egusa (p. 15), A.133. CLP. Chemainus, where the A.132's position was last received (p. 20-21), J.957.SJB. Sant Juan Bautista (scale model) (p. 39), J.958. TFL. TFL 44 [the restored masts of the Sant Juan Bautista] (p. 35-40), J.960. NAK. Transcript of an interview with Ms. Nakazawa (p. 41-45), J.962. CKB. Inside the crumbling keel of the Sant Juan Bautista (p. 46), J.973. BOK. The original masts of the Sant Juan Bautista replica (p. 47), J.973. LPL. Lunenburg time parking lot of the Sant Juan Bautista Museum (p. 48), L.769. PAC. Port Alberni conversation (p. 53-57), R.957. RRR. Mount Robson's remarkable resemblance to Narada Devi (p. 94-95), T.472. FSW. Fisherman on Ishinomaki's sea wall (p. 109), T.495. PVI. Ishinomaki: a panoramic view (p. 110-121), Y.365. UTA. routine control of every utility pole with binoculars (p. 165)



The replica, built in 1993 and on display ever since in Ishinomaki, was dismantled by the tsunami that hit the Japanese coast in 2011.

Unable to secure suitable replacement logs from within domestic forests, four Douglas fir logs and one western red cedar log were shipped from Port Alberni, British Columbia, Canada, to Ishinomaki, Japan.

## THE RESTORED MASTS OF THE SANT JUAN BAUTISTA [REPLICA]

J.957.SJR



## TFL 44 [THE RESTORED MASTS OF THE SANT JUAN BAUTISTA]

J.958.TFL

see next page



Dear Sir or Madam,

I am a photographer working on a growing encyclopaedia on ships, forests and pacemakers.

Through a series of cross-references, I came across the story about the logs your company delivered to Ishinomaki, Japan, for the reconstruction of the masts of the Sant Juan Bautista.

Is it possible to put me in touch with someone who was involved in this operation? Another source (T.F.) told me the logs (four Douglas fir logs and one western red cedar log) came from the Port Alberni region. Can you confirm this?

All the best and thank you in advance,  
Michiel De Cleene

Hi,

We're not sure specifically, but they came out of TFL44. The South block that meets with Bamfield is the best chance.

Good luck.

## TFL 44 [THE RESTORED MASTS OF THE SANT JUAN BAUTISTA]

J.958.TFL

see next page



Excerpt from Tree Farm Licence 44 management plan 5, June 2010\*:

TFL 44 is located in west-central Vancouver Island in the vicinity of the Alberni Inlet and Barkley Sound. It extends from Strathcona Park in the north to Walbran Creek in the south, including land from the Pacific Ocean to the Beaufort Range and Mount Arrowsmith.

TFL 44 currently covers over 232,000 ha, approximately five-sixths of which is productive forest land. The major tree species include western hemlock, western red cedar, balsam (amabilis fir), Douglas fir and yellow cedar.

The forests of TFL 44 predominantly lie within the wetter and very dry maritime Coastal Western Hemlock biogeoclimatic zone. Annual precipitation levels reach 3,000 to 5,000 mm. At sea level the climate is characterized by short winters with intermittent wet snow storms; at the highest elevations a prolonged snow pack may persist. The summer period from July to September can be dry and warm.

\* File: 12850-20/TFL44, CLIFF 176004', viewed: 02.07.2017, <[http://www.westernforest.com/wp-content/uploads/stewardship/TFL44\\_MP5.pdf](http://www.westernforest.com/wp-content/uploads/stewardship/TFL44_MP5.pdf)>

## TFL 44 [THE RESTORED MASTS OF THE SANT JUAN BAUTISTA]

J.958.TFL

see next page



The topography of TFL 44 is varied with mountainous, steep formations dominating the landscape on the west side of the Alberni Inlet (Great Central Lake and Henderson Lake vicinities) and more rolling gentle terrain on the east side of the Alberni Inlet. Forest management and forest product manufacturing are the major employment activities in this region. Other economic activities include aquaculture, commercial and recreational fishing and tourism.

Hi,  
Here is some important information for you regarding the Sant Juan Bautista. It is taken from an email of some colleagues from our Japan office: I called the Sant Juan Bautista Museum directly but could not get any details other than the fact that the facility is closed until further notice.  
I called the Miyagi Prefectural Office to see what else I could find out. All of the

government officers that I dealt with during the height of the project are no longer there, so I was referred to a Ms. KONDO.  
Apparently, not long after the completion and re-opening of the museum (and repaired Sant Juan Bautista Spanish Galleon), the museum backed by the prefectural government conducted a thorough inspection of the ship as well as the entire facility. They found:

a) That the structure of the ship, especially the main keel and planks that make up the hull had deteriorated extensively. One report shows that only 30% of the hull planking remains viable or safe.

## TFL 44 [THE RESTORED MASTS OF THE SANT JUAN BAUTISTA]



b) There are serious safety issues concerning not only the ship but also with some of the surrounding structure(s) in the facility.

c) The Miyagi Prefecture made a decision to close the facility in March 2016 pending further studies and consideration as to what to do with the facility and ship.

d) Due to the still on-going reconstruction efforts in the area, priority for use of government funds for repairing the Sant Juan Bautista Ship and Museum is understandably low.

## TFL 44 [THE RESTORED MASTS OF THE SANT JUAN BAUTISTA]

SEE ALSO: A.133, C1.P Chernomus, where the Authenticity's position was last received (p. 20-21). J.957.SJF/SJF/SJF/SJF The restored masts of the Sant Juan Bautista [scale model] (p. 33). J.957.SJF/SJF/SJF/SJF The restored masts of the Sant Juan Bautista [replika] (p. 34). J.960.NAK Transcript of an interview with Ms. Nakazawa (p. 41-45).

J.963.CKB Inside the crumbling keel of the Sant Juan Bautista (p. 46). J.973.BOR The original masts of the Sant Juan Bautista replica (p. 47). J.973.LPL Lumber in the parking lot of the Sant Juan Bautista Museum (p. 48). L.463.LLL Traces of fogging on Mount Egateo (p. 50-52). L.769.FAC Fort Albert

conversion (p. 53-57). M.392.DST Dark structure in a former atomic command bunker (p. 72). T.495.PV1 Ishinomaki, a panoramic view (p. 110-121)



e) At the present time, there is no clear schedule as to when repair work will be conducted or if at all.

f) A main difficulty is the fact that operating and maintaining the facility has been a money losing case since it was first built. There is very little support for continuing operating the facility if it is going to continue losing money.

So the ship is still there and can be seen from outside of the facility but nobody is allowed inside the facility let alone on the ship. It is too dangerous.

Much of the wood apparently is showing a considerable degree of rot. (I think that the only thing that is still in good shape are the THREE MAIN MASTS!!!)

## TFL 44 [THE RESTORED MASTS OF THE SANT JUAN BAUTISTA]

J.958.TFL



[a meeting room at the Sant Juan Bautista museum, Ishinomaki, Japan]  
[wood clad walls and ceiling, a dark polished wooden table, twelve leather chairs, a scale model and a window facing the sea]  
[with Koichi Ohtsu [interpreter], Ms. Nakazawa [curator] and M.D.C.[photographer]]

[cough]  
[footsteps]  
[briefcase opening]

[introduction in Japanese by K.O.\*]  
[exchange of gifts and business cards]

**K.O.:** 'Her understanding, after your exchange by email, is that you would like to know about the restoration of the tsunami-hit Sant Juan Bautista. However, Ms. Nakazawa also suggests you have a look at the films playing in the cinema. They tell the story of the original Sant Juan Bautista, not the replica, and the ship's first crossing of the Atlantic Ocean in 1614

as the first leg in a journey to Rome.'

[coffee is brought in]  
[Ms. Nakazawa opens a book and turns it in M.D.C.'s and K.O.'s direction]

**K.O.:** 'These are pictures of the initial building of the replica in 1993.'

**M.D.C.:** 'I read that at the outset of the building of the replica in 1993 there were no original blueprints or plans of the ship at hand, but that there was only a description of the ship. The replica is supposedly built based on this description.'

**K.O.:** 'They couldn't preserve the original plans for the ship. Because of the situation in those days, Japan was shut doors to the world, to the outside world. They were too nervous to preserve the plans.'

**M.D.C.:** 'Too nervous?'

**K.O.:** 'I mean, they couldn't. The original plan does not exist, didn't exist when they tried to build it. They had a... well, the size, the metrics of the plan. They tried to get plans of other... the other world...'

\* The translation of M.D.C.'s questions to Japanese and Ms. Nakazawa's answers in Japanese are excluded from this transcript.

## TRANSCRIPT OF AN INTERVIEW WITH MS. NAKAZAWA

J.960.NAK

see next page



of that age, the seventeenth century. From Europe. They accessed preserved plans of the same age of European ships. Of similar ships.'

**M.D.C.:** 'On a Japanese blog by a man involved in the 1993-build, I read about the methods used in building the replica. The man mentions his doubt about the right method to build an original replica. He wonders whether he can for instance use a circular saw or an electric drill in building a seventeenth century ship.'

**K.O.:** 'Ehm did, what what? What did you say?'

**M.D.C.:** 'The methods?'

**K.O.:** 'Aah! The METHODS!'

**M.D.C.:** 'Did they use contemporary methods and machines or is the replica built according to the methods available in the seventeenth century?'

**K.O.:** 'Well basically they used contemporary methods and tools. They, ehm, her answer is that basically the shipbuilders at the Yamanishi Shipyard didn't use the methods of that age. But of course it is still a wooden ship. Building one has its own peculiarities and methods.'

[M.D.C. points at a portrait of a man in Ms. Nakazawa's book]

**M.D.C.:** 'Is this the shipwright? The carpenter?'

**K.O.:** 'Yes, he is the chief of the shipbuilders.'

**M.D.C.:** 'In some emails prior to this conversation I was told the 1993-chief-shipwright is now too old for an interview, but I was wondering whether I could make his portrait or meet him shortly.'

**K.O.:** 'He is deceased.'

**M.D.C.:** 'Oh... Could you ask Ms. Nakazawa whether she knows what his reaction to the disaster and the destruction of the ship was?'

**K.O.:** 'He died twenty years ago.'

[M.D.C. shortly talks about and shows J.958.TFL TFL44 The Restored Masts of the Sant Juan Bautista]  
[rustling papers]

**K.O.:** 'These two masts, the foremast and the main mast, were made from the Canadian wood you went looking for. Just after the disaster there was a Canadian delegation, visiting Sendai, the prefectural office. And they asked if there is anything they could do for the restoration, following the disaster. And the prefectural counsel answered: well if they could...'

## TRANSCRIPT OF AN INTERVIEW WITH MS. NAKAZAWA



could you please give us the big wood? The masts are too tall and it is very hard for them to find the right wood for these masts. In 1993, when they began to build it, they imported the trees for the masts from the USA. So... the Canadian offer was to replace those.'

**M.D.C.:** 'Someone at the Canadian forestry company told me the ship is closed to the public because of wood rot.'

**K.O.:** 'Why we can't, why they can't, why they don't allow people in, going to see the ship, is simply because the mast itself, the masts themselves, are intact, they are okay. But the keel of the ship – you know that – the downpart of the ship is decaying and it is getting very feeble. Well, they say that the shipbuilder's estimation in 1993 was fifteen or twenty years of endurance, but already twenty-five years have passed since the initial building.'

**M.D.C.:** 'It was only made to last fifteen years? So the replica of the ship was bound to disappear from the beginning?'

**K.O.:** 'Whether the ship is going to be broken or not has not been decided yet, exactly, but at present it is decided that until 2020, two years from now, the whole outside, the ship's outside will be preserved. And

after that, well, it is likely to be broken. Because of the... because it surpasses by far the years of endurance. But it is very precarious still.'

**M.D.C.:** 'Some people in Ishinomaki have told me they consider this ship to be or to become a symbol for the perseverance and resilience after the tsunami. They might loose this symbol in two years time then?'

**K.O.:** 'Yes, but about that symbol of resilience: it is the first time for me to know this... but 400 years ago... there was a big tsunami of almost the same scale of the famous 3.11 disaster. But in about two months and a half after that disaster they built the Sant Juan Bautista and sent the missions to Mexico and Rome. So, for them, it is like the same memory. They rebuilt, and restored this disaster-hit Sant Juan Bautista in about eight months. In that way it became a symbol for the resilience. It's the first time for me to learn about this.'

[Ms. Nakazawa shows a damage report in a purple folder]

**K.O.:** Please have a look at all these photos. These pictures are a report of the destruction following

## TRANSCRIPT OF AN INTERVIEW WITH MS. NAKAZAWA



the tsunami.'

**M.D.C.:** 'Could I make some photographs of this document?'

**K.O.:** 'She will ask her superior.'

[Ms. Nakazawa disappears into the adjacent room]

**M.D.C.:** 'Is it okay for you to work like this?'

**K.O.:** 'I am sorry for my clumsy English.'

**M.D.C.:** 'Oh no, it's fine.'

**K.O.:** To be honest, it is the first time I speak English in about six months. Because there is no one in Ishinomaki I can talk English to.'

**M.D.C.:** 'I couldn't t...'

[Ms. Nakazawa enters the room again]

**K.O.:** 'You can take pictures of the damage report but only of photographs without any people.'

**M.D.C.:** 'Thank you. Could I also make a portrait with the scale model behind Ms. Nakazawa's back?'

**K.O.:** 'If it is documentary, it is okay.'

[K.O. and Ms. Nakazawa converse in Japanese]

[tripod legs sliding open]  
[a zip opening]

**M.D.C.:** 'Could she look at you?'

[chuckles]  
[Japanese talking]  
[camera clicks]

**M.D.C.:** 'Could she look straight into the camera?'

[camera clicks]

**M.D.C.:** 'Thank you.'

[camera bag closing]  
[tripod legs closing]

**K.O.:** 'She would like to know what photographs you would like to make besides the damage report and the portrait.'

**M.D.C.:** 'From outside the museum, I would like to photograph the ship and the way it is set in today's landscape.'

## TRANSCRIPT OF AN INTERVIEW WITH MS. NAKAZAWA

J.960.NAK

see next page



**K.O.:** 'Hm.'

**M.D.C.:** 'And, furthermore, I would like to get as close as possible to the mast and ehm especially to the point where the new, restored masts meet the original 1993 replica.'

**K.O.:** 'You...'

**M.D.C.:** 'I realize it is a lot to ask to allow me to enter the ship, considering the decaying keel.'

**K.O.:** 'Close-up pictures of how the mast is connected?'

**M.D.C.:** 'Yes'

**K.O.:** 'Her direct response is that if it is today, it is possible for you to photograph the mast at the stem.'

**M.D.C.:** 'Sure, I can do it today.'

**K.O.:** 'She can provide you access, but only today.'

[K.O. pauses for a second, turns towards M.D.C.]

**K.O.:** 'Are you sure you can do that today?'

**M.D.C.:** 'Yes, it shouldn't take too long and I wouldn't want to miss the opportunity.'

**K.O.:** 'Okay, she will escort you onto the ship.'

**M.D.C.:** 'Great!'

**K.O.:** 'She says that she would like me to accompany you and her to the ship. To, ehm, deal with the language barrier.'

Hej!! sorry to be late to email you back!

couldn't cooperate with your work.

About Yamanashi shipyard: they told me that all records of restorations were washed away by the big tsunami caused by the Great East Japan earthquake in 2011. They also said that they're sorry that they

Have a nice day,  
Miwa

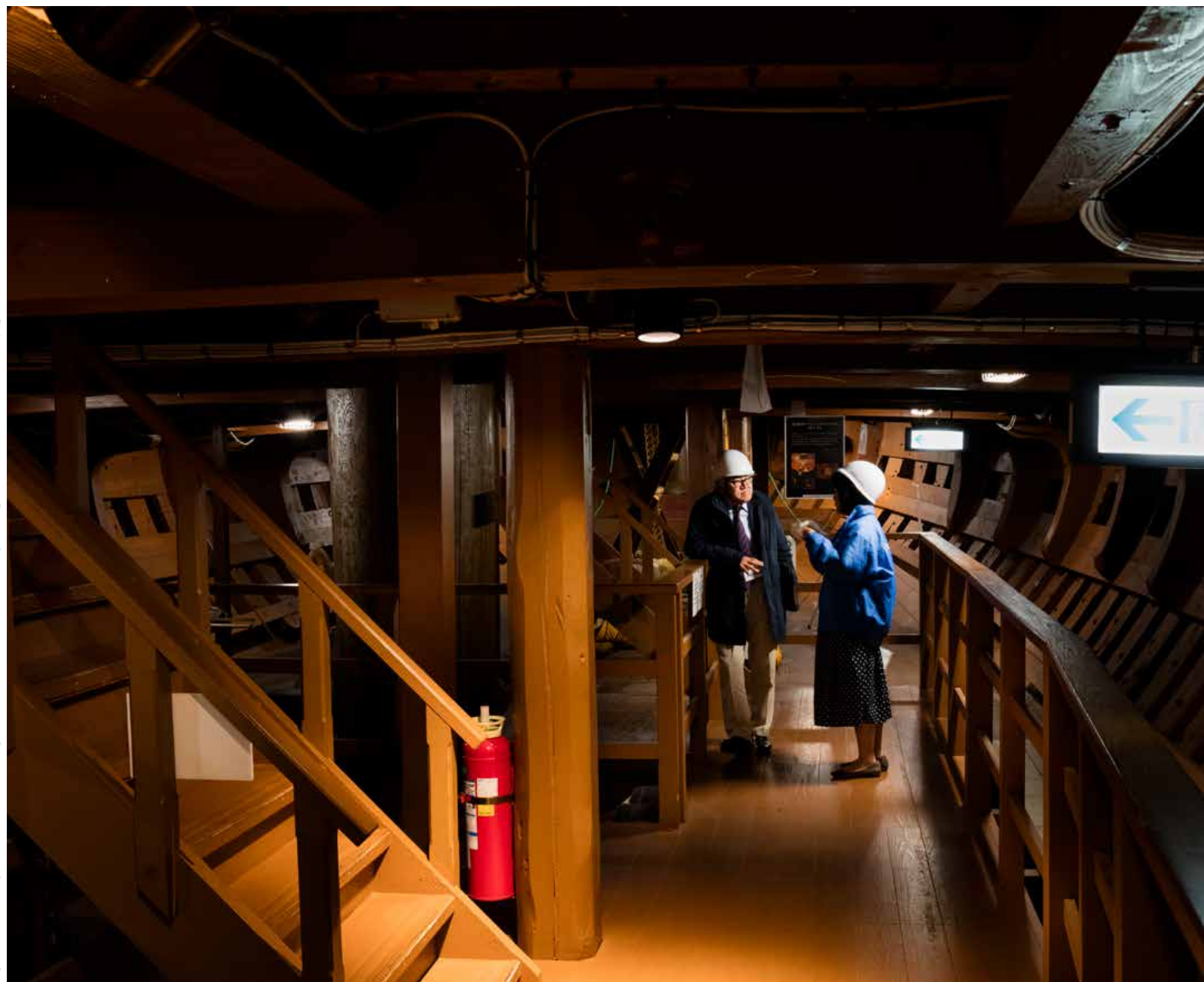
## TRANSCRIPT OF AN INTERVIEW WITH MS. NAKAZAWA

J.960.NAK

Ishinomaki, a panoramic view (p. 110-121), T. 613.RHI Reinforced hillside in Ishinomaki (p. 122-123), T. 613.TPO Three people looking out over crumbling Mount Fuji at the Osawa failure (p. 124), T. 613.UOF Reinforcements along Mount Fuji's Osawa failure (p. 125-127), U. 699.PFJ Penryn, in search of the fireground (p. 141-143), Y. 863.VAY Cavity (p. 170)

Bautista (p. 35-40), J.960.NAK Transcript of an interview with Ms. Nakazawa (p. 41-45), J.973.BOR The original masts of the Sant Juan Bautista replica (p. 47), J.973.LPL Lumber in the parking lot of the Sant Juan Bautista Museum (p. 48), M.392.DST Dark structure in a former atomic command bunker (p. 72), R.957.NAD.A lost nuclear-powered listening device on Nanda Devi (p. 90-93), T.495.PVI

SEE ALSO: A.132.ASA Authenticity at the scrapyard, Aspopyrgos (p. 4-5), A.132.ASD Ships bunked in anchorage area in Aspopyrgos (p. 6-9), A.133.CLP Chelamius, where the Authenticity's position was last received (p. 20-21), J.957.SIB Sant Juan Bautista [scale model] (p. 33), J.957.SJR The restored masts of the Sant Juan Bautista [replica] (p. 34), J.958.TFL TFL 44 [the restored masts of the Sant Juan



We pass through the closed gate [visitors can no longer go down to the level of the dock] and take the next escalator downward. About halfway down the second escalator, Ms. Nakazawa points at a line and a blue wave-symbol on the wall. 'The tsunami reached up to this point, about eight metres above the regular water surface,' she says.

She hands K.O. and me a helmet. She puts one on herself and we go outside into the dock [the sound of footsteps on a metal walkway]. She leads us onto the ship's deck, into the ship's hull and [footsteps on a wooden stairwell] two floors down to the point where the main mast, made from Canadian cedar, seamlessly meets the original 1993 replica.

A distinct and sharp chemical smell looms on the lower deck. A collection of fans and hoses creates a draft of wind [unintelligible Japanese talking in the background, practically inaudible over the fans' noise].

Ms. Nakazawa and K.O. stand and talk beside the foot of the main mast. 'Should we move? Are we in the picture? Should we stand somewhere else?' he asks after some time.

## INSIDE THE CRUMBLING KEEL OF THE SANT JUAN BAUTISTA

J.962.CKB



M.D.C.: 'These are the masts that were destroyed?'

[loud rain in the background]

K.O.: 'Oh, yes. The original masts.'

[In the car driving back from the museum, K.O. and M.D.C. talked about the weather and his malfunctioning knee]

M.D.C.: 'It was snowing at the time of the tsunami?'

K.O.: 'Yes, it began snowing after the earthquake, towards the evening. It wasn't heavy snow, but it snowed constantly. It became very cold.'

## THE ORIGINAL MASTS OF THE SANT JUAN BAUTISTA REPLICA

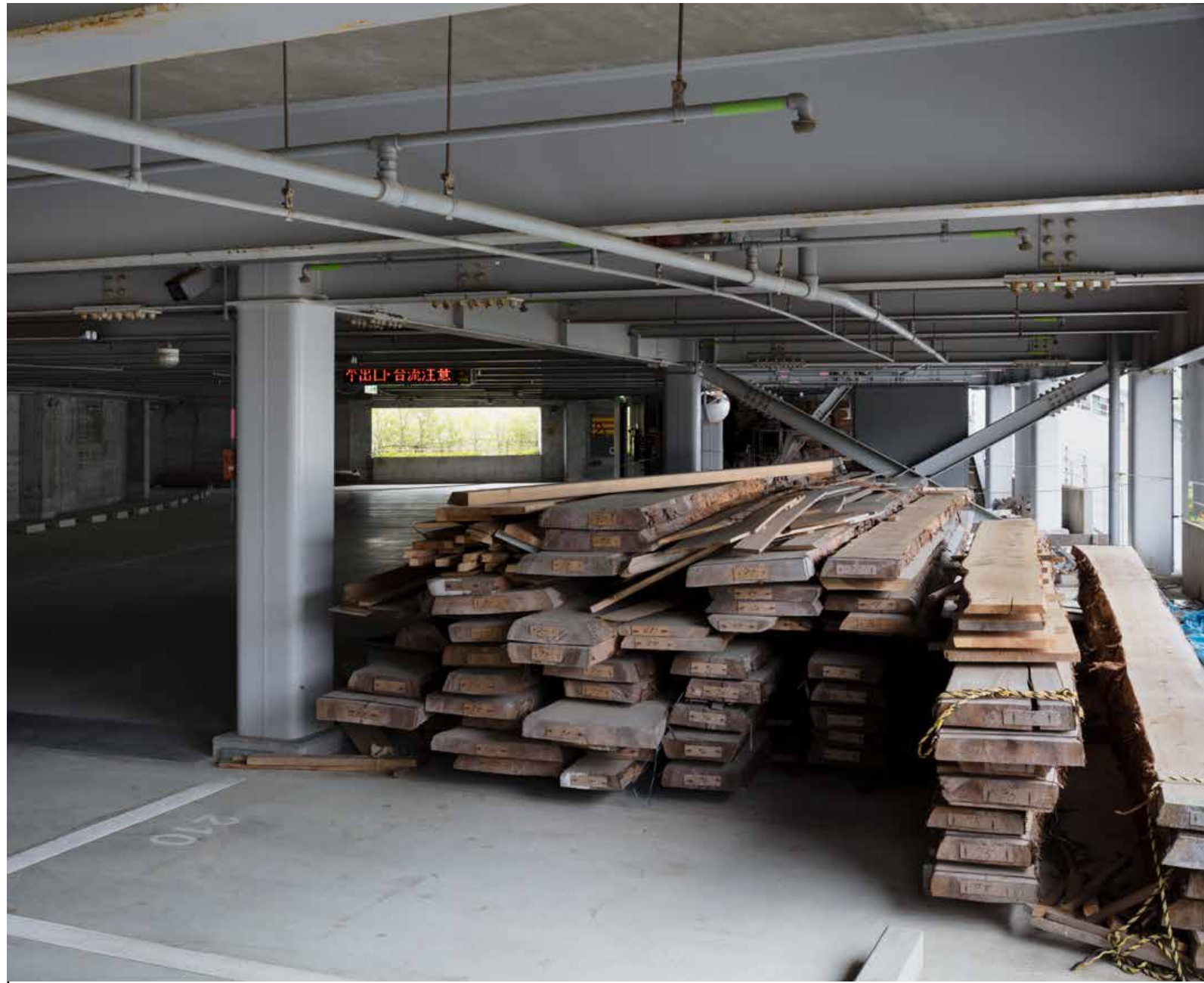
J.973.BOR

Bautista Museum (p. 48), L. 769.PAC Porc Albem conversation (p. 53-57), T.472.FSW Fisherman on Ishinomaki's sea wall (p. 109), T.495.PVI Ishinomaki, a panoramic view (p. 110-121)

Bautista Museum (p. 48), L. 769.PAC Porc Albem conversation (p. 53-57), T.472.FSW Fisherman on Ishinomaki's sea wall (p. 109), T.495.PVI Ishinomaki, a panoramic view (p. 110-121)

SEE ALSO: J.957.SIB Sant Juan Bautista [scale model] (p. 33), J.957.SJR The restored masts of the Sant Juan Bautista [replica] (p. 34), J.958.TFL TFL 44 [the restored masts of the Sant Juan Bautista]





## LUMBER IN THE PARKING LOT OF THE SANT JUAN BAUTISTA MUSEUM

J.973.LPL



The plot of land where the Authenticity was scrapped can be seen from the adjacent Mount Egaleo that separates Athens from Aspropyrgos. At sunset the hill's shadow slowly envelops Athens.

## MOUNT EGALEO'S SHADOW

L.463.ESH

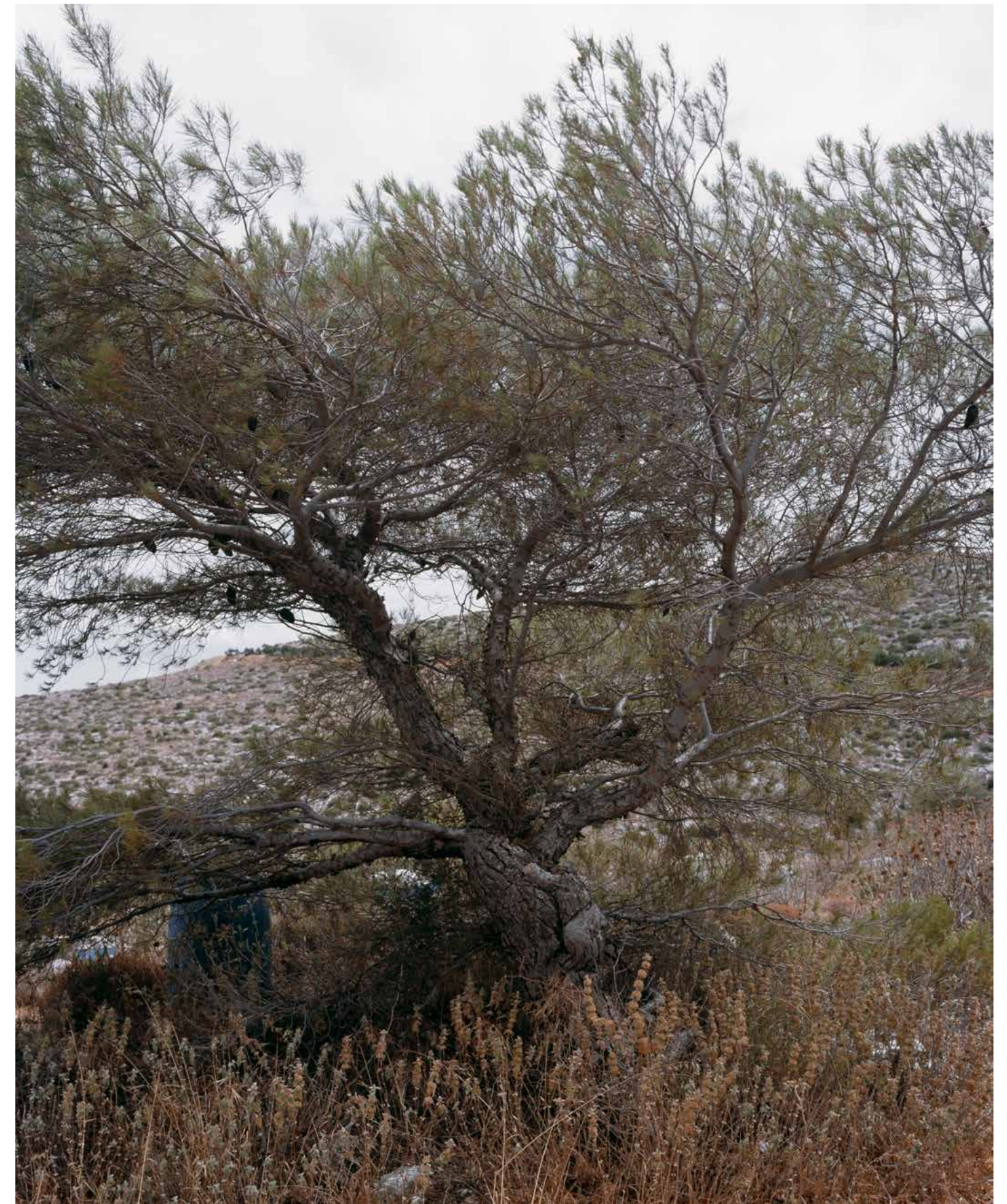


‘The saw cuts [B14, E16, F16, S19] are sloppy and appear to be made in a haste. The cuts are situated at a height of approximately seventy centimetres from the ground. The hill’s protected woods have seen an increase in these scattered traces of illegal logging since a rise in tax on heating fuel in October 2012. Many Greeks set about logging illegally in protected woods, mostly in the colder North of the country, but also here in Egaleo, a western suburb of Athens.’

## TRACES OF LOGGING ON MOUNT EGALEO

L.463.ILL

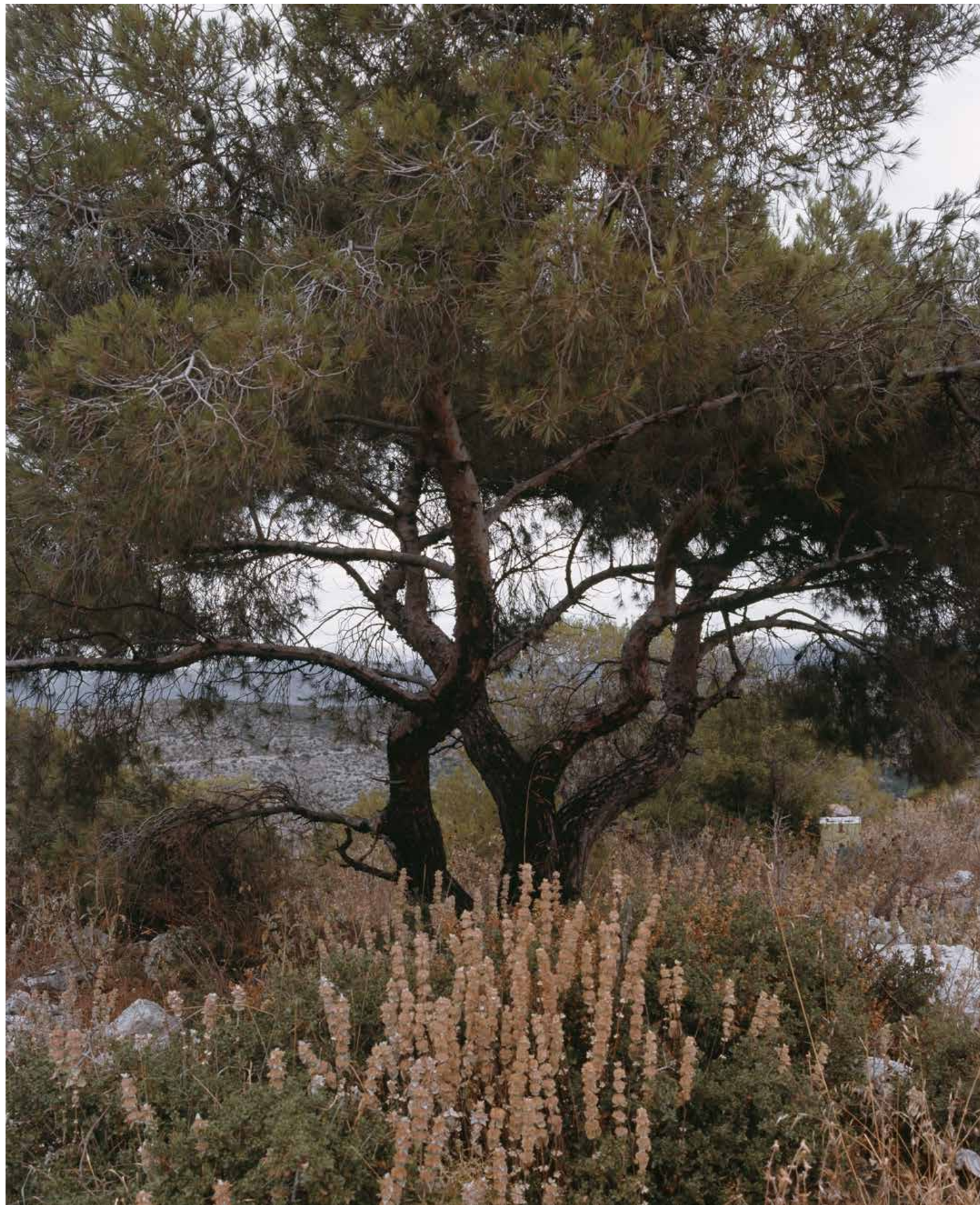
see next page



## TRACES OF LOGGING ON MOUNT EGALEO

L.463.ILL

see next page



## TRACES OF LOGGING ON MOUNT EGALEO

L.463.ILL



'BYE-BYE [waves at the logs being loaded into the ship's hull], they are leaving and never coming back.

[...]

We're a country of 35 million people and we have everything. Wood, oil, uranium... you name it, we have it.

[...]

We should be self-sufficient, but instead we're exporting everything only to buy the same goods at a higher price.

[...]

A part for my boat about this big [shows the size of a watermelon with his hands] would cost me \$325 in the States, but costs me CAD 700 here. That's not free trade, that's highway robbery.

[...]

## PORT ALBERNI CONVERSATION [MELROSE STREET AND 2ND AVENUE]

L.769.PAC

see next page



For every four ships like these [points at the Nanaimo Bay bulk carrier\*], one ship with processed wood leaves.

[...]

No, I never worked in the wood industry, I'm a retired mixed concrete truck driver. I used to ride for Heidelberg.

[...]

They say they export the raw logs because the Japanese and the Chinese use different dimensions for their Lumber.

[...]

We could reset the saws and the machines to make these dimensions. That's not the reason.

[...]

\* Nanaimo Bay, bulk carrier, IMO: 9749831, MMSI: 477692500, Call Sign: VRQF5, Flag: Hong Kong, Built: 2016, Gross Tonnage: 21538

## PORT ALBERNI CONVERSATION [HARBOUR ROAD]

L.769.PAC

see next page



The logs mostly go to Asia, but they even go to Oregon. Oregon! I thought they had their own trees.

[...]

The factories around here all go belly up. The mills don't have lumber to cut and the other factories don't have pulp to process.

[...]

The only ones with a job around here are the loggers and the guys loading the ships.

[...]

We should take care of our resources. They are exporting our wood; leaving this town without jobs. Have you seen how many houses are for sale? There's a moving van on every block.

[...]

## PORT ALBERNI CONVERSATION [2ND AVENUE]

L.769.PAC

see next page



About every second day a ship like this one leaves, the hull filled with logs.

[...]

Our trees used to be cut to lumber right here and then exported. Nowadays we just cut them down, debark them, float them down the river and load them onto a ship.

[...]

The felling and the debarking happens in the woods. So the only handling the town gets to see is the wood being loaded onto these ships.

[...]

You see, the town slopes down to the harbour and everyone has a first class view of resources and employment being shipped abroad.'

## PORT ALBERNI CONVERSATION [MALLORY DRIVE]

L.769.PAC

see next page



After leaving port Alberni and navigating through the Alberni Inlet, the Nanaimo Bay set sail for the port of Taicang, just North of Shanghai, China.

## PORT ALBERNI CONVERSATION [STIRLING STREET]

L.769.PAC

SEE ALSO: A.132 ASD Ships bunked in anchorage area in Astropyrgos (p. 6-9), A.133 CJP Chemainus, where the Authenticity's position was last received (p. 20-21), J.957 SIR, The restored masts of the Sant Juan Bautista [replica] (p. 34), J.958, TFL, TFL 44 [the restored masts of the Sant Juan Bautista] (p. 35-40), J.973, BOR, The original masts of the Sant Juan Bautista replica (p. 47), J.973, LPL Lumber in the parking lot of the Sant Juan Bautista Museum (p. 48), L.463 L.L. Traces of logging on Mount Egaleo (p. 50-52), S.715, ISM, Isla Melones, a growing island (p. 96-107), S.913, CDA, Cap d'Antifer, deepwater outpost (p. 108), T.495, PVI, Ishinomaki, a panoramic view (p. 110-121)



Accidental sighting of a Turkish submarine in Devonport Yard, Plymouth [N15, O15, P15].

## NUCLEAR SUBMARINES QUEUING IN DEVONPORT YARD

M.193.SDY

see next page



Several ships of Britain's former nuclear submarine fleet now lie in Devonport dockyard [H12, I12]. Four defueled, eight with fuel. The queue of nuclear submarines waiting to have their fuel disposed of began in 2002.

- 'The Devonport defueling facilities do not meet modern standards; the Nuclear Installations Inspectorate will not tolerate any further use.'
- 'What are we supposed to do with the eight subs that need defueling?'
- 'This department is not authorized to resolve this.'
- 'Do you suggest we keep the decommissioned fleet where it is?'
- 'Keep it afloat.'

## NUCLEAR SUBMARINES QUEUING IN DEVONPORT YARD

M.193.SDY

see next page

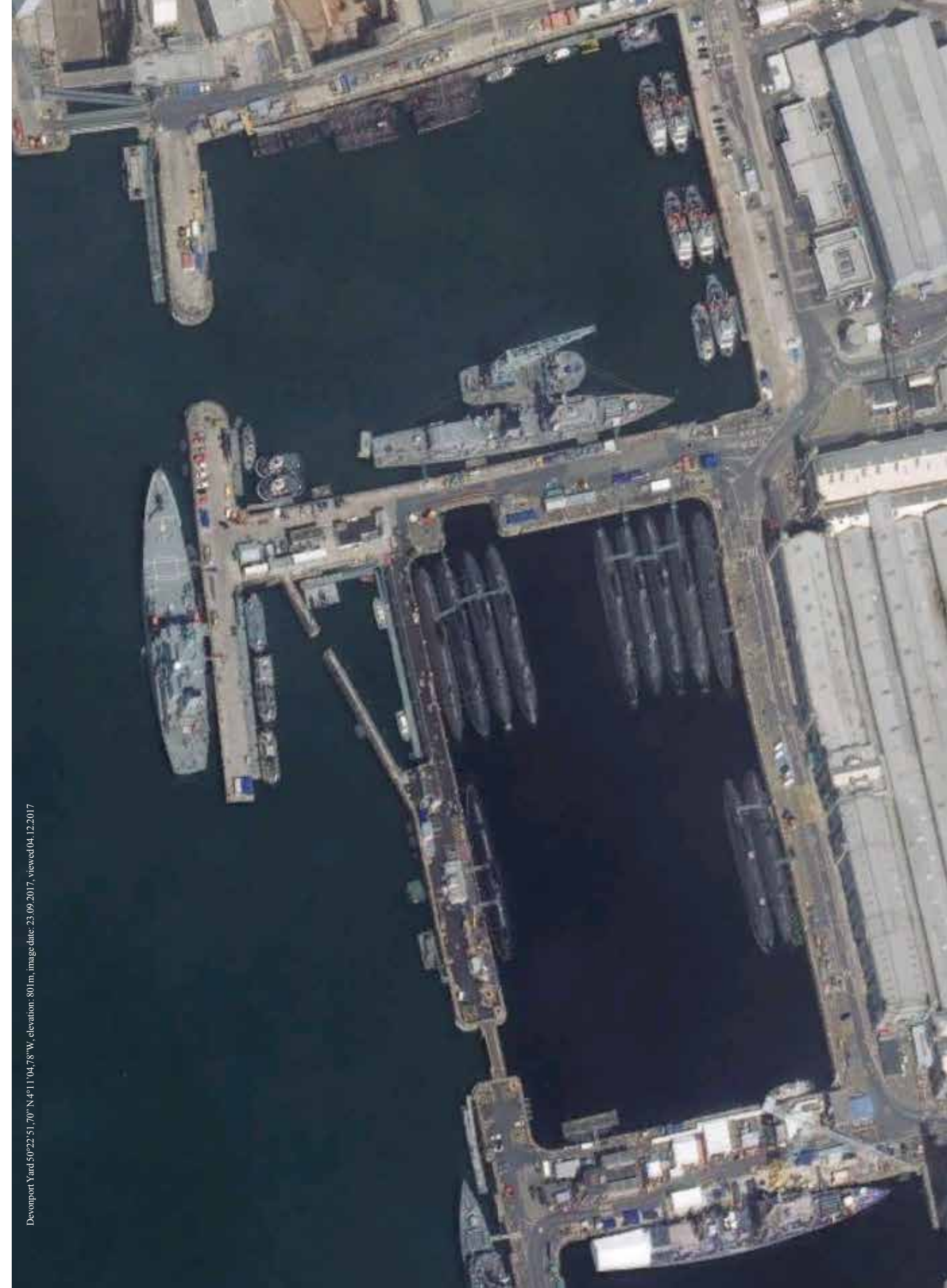
SEE ALSO: A.132.APC Authenticity in Plymouth Sound, postcard (p. 2-3); A.132.ASD Ships bunked in anchorage area in Aspopylagos (p. 6-9); A.132.ESN.HL.Lewis Shipyard & Mount Figeao (p. 15); M.199.GSW Wreck of the Glen Strathallan (p. 62); M.199.RBO Being 737 artificial reef; Chermaitus (p. 63-64); M.234.KLD.KLD, hiding as a means for conservation (p. 65-69); M.251.TES Temporary storage of slightly radioactive material (p. 70); M.253.PK Telead (p. 71); M.392.DST Dark structure in a former atomic command bunker (p. 72); M.392.TNK Kitcher or a former atomic command bunker (p. 73); P.733.(ALL) Plutonium 238 producer; R.957.NAD A lost nuclear-powered listening device on Kamada Devi (p. 90-93); T.495.PV Istimonak, a panoramic view (p. 110-121); T.957.VSS Wooden scale model in the home of a retired submariner (p. 172)



# NUCLEAR SUBMARINES QUEUING IN DEVONPORT YARD

M.193.SDY

see next page



Devonport Yard 50°22'51.70"N, 4°11'04.78"W, elevation: 801 m, image date: 23.09.2017, viewed 04.12.2017



[Y11] Approximate position of the Glen Strathallan, a luxury steam yacht, scuttled near the Shagstone in Plymouth Sound to become an artificial reef for scuba diving.

## WRECK OF THE GLEN STRATHALLAN

M.199.GSW



[floating above the Boeing 737 artificial reef in Chemainus, Canada]  
[a conversation between Peter, Andy and M.D.C.]  
A.L.: 'There's skeleton shrimp all over my gloves.'  
P.L.: 'They were all over the descent lines, did you see the wolf-eel in the cockpit?'  
A.L.: 'I did, a lot of jellyfish too.'  
P.L.: 'Good dive, right? Good visibility.'  
A.L.: 'I could see half of the plane from the tail.'  
P.L.: 'Could you help me with the zip of my suit? We have to start heading back, I have a ferry to catch.'

M.D.C.: 'Do you happen to know the man who made the famous UFO video from Penelakut Island?'  
P.L.: 'No I don't, you know his name?'  
M.D.C.: 'I don't'  
A.L.: 'That's a sea urchin.'  
M.D.C.: 'I only know he lives on Penelakut Island, smokes and has kids named Alex and Owen.'  
A.L.: 'A serpent sea star.'

## BOEING 737 ARTIFICIAL REEF, CHEMAINUS

M.199.RBO

see next page





**P.L.:** 'These last years there has been a lot of talk of sightings in this area.'  
**M.D.C.:** 'He's on the phone with someone named Tif while he's filming it.'  
**P.L.:** 'No that doesn't sound familiar. I live on the neighbouring island. The credibility of all these sightings has disappeared since cell phones come equipped with a camera. A photograph of a UFO used to be something amazing, a dish in the sky, some lights over a mountain, but now the multitude of footage drowns out the credible moments.'  
**A.L.:** 'This is a clown nudibranch.'  
**P.L.:** 'There aren't more inexplicable sightings than there used to be, but there's a lot more footage going around.'  
**A.L.:** 'That's a sea cucumber, you can touch it.'  
**P.L.:** 'You know, the thing with UFO's is, it proves people really don't want to believe we're alone.'  
**A.L.:** 'A rainbow star and a slime star.'

## BOEING 737 ARTIFICIAL REEF, CHEMAINUS

M.199.RBO



## KLD, HIDING AS A MEANS FOR CONSERVATION

M.234.KLD

see next page

The air watchtowers of the Korps Luchtwacht Dienst, a network of 276 watchtowers built across the Netherlands in the 1950s and 1960s, were conceived to spot Soviet aircrafts.

Approximately half of these towers were built of prefabricated concrete elements of which barely twenty remain. Most towers were demolished. Some are partly reused as woodshed, toolshed or dovecot. The remaining constructions are often deliberately surrounded by and concealed from view by trees in an attempt to conserve them.

## KLD, HIDING AS A MEANS FOR CONSERVATION

M.234.KLD

see next page



## KLD, HIDING AS A MEANS FOR CONSERVATION

M.234.KLD

see next page



## KLD, HIDING AS A MEANS FOR CONSERVATION

M.234.KLD

see next page



## KLD, HIDING AS A MEANS FOR CONSERVATION

M.234.KLD



## TEMPORARY STORAGE OF SLIGHTLY RADIOACTIVE MATERIAL

M.251.TES



Telerad consists of a network of over 200 measuring stations that continuously monitor the radiation level in the air and in the river water in Belgium. Every ten minutes these monitoring stations generate data that is automatically transmitted to the central servers.

Bastogne, 20.08.2016, 14:00 GMT  
0,107 $\mu$ Sv/h

## TELERAD

M.253.TER



Beneath Citadelpark, Gent, Belgium, lies a former atomic command bunker, it has been decommissioned for years and a severe fungus is eating away at the wood. Some ten years ago, the museum of contemporary art, located above ground in the same park, used the structure for an exhibition. It is no longer clear who left what.

# DARK STRUCTURE IN A FORMER ATOMIC COMMAND BUNKER

M.392.DST



# KITCHEN OF A FORMER ATOMIC COMMAND BUNKER

M.392.TNK



## EXPLANTED PACEMAKER

P.567.EXP

## Are nuclear pacemakers necessary?

An order for the first 100 British built nuclear-powered pacemakers was announced last week by the Harwell Atomic Energy Laboratory, which will build the devices for the Department of Health and Social Security (DHSS).

Conventional pacemakers with chemical batteries must be replaced surgically every three years, while the nuclear devices have a lifetime of 10-25 years. But new lithium battery pacemakers already being installed should have a 7-10 year life, and rechargeable devices should last as long as the nuclear devices. This raises the question whether plutonium-238, one of the most toxic substances known, should be put into such wide and uncontrolled circulation when substantially less dangerous alternatives are available.

Pacemakers are important for the nuclear industry. A medical use of plutonium will permit the industry to bill the materials as a "lifesaver", thus offsetting some of the strong objections to the use of other isotopes of plutonium in nuclear generation of electricity. And the devices are important in their own right; David Fishlock in the *Financial Times* (24 September) predicted that by the early 1980s British Nuclear Fuels could be earning £10 million annually from 10 000 units a year.

Pacemakers provide rhythmic electrical stimuli to defective hearts. They have found wide acceptance in the US and Sweden, where more than 150 per million population per year are installed. Britain has been slower, however, installing only 25 per million per year.

Traditionally, power has been provided by mercury-zinc cells which last 2-3 years, and must then be surgically replaced. As the average age for patients requiring pacemakers is nearly 70, a short life pacemaker is acceptable for many people. But some heart victims are much younger and thus face 10-20 operations in their lifetime. Newer lithium-halide cells have a life of 7-10 years, but cost £650 compared to £300 for mercury-zinc. Last Friday, the *Oxford Times* reported that the Oxford region of the National Health Service was unwilling to pay the extra cost, so that lithium-halide units will be installed only in patients willing to pay the extra £350 themselves. Ironically, experts estimate that the extra operation costs £500-£1000.

To extend the life beyond 10 years there are two choices. Nuclear devices generate heat which can be converted to electricity. <sup>238</sup>Pu, with a half life of 86 years, can in theory power a pacemaker for at least 25 years. Harwell has already installed 70 of the devices experimentally, and the oldest is still working after 5½ years. Last week's order marks the transition from experiment to production. But the cost will be at least £2000 - triple that of the lithium-halide devices that Oxford Region NHS is already unwilling to install.

FLOOD, M., Are Nuclear Pacemakers Necessary?, *New Scientist*, 'Catastrophe Theory', 20 November 1975, p. 471

New Scientist 20 November 1975

The alternative is chemical batteries recharged with a special coil which sends radio signals through the patient's skin to a receiver on the pacemaker. Units with nickel-cadmium batteries, which must be recharged for an hour each week, have been installed in 1000 patients in the US. But a new device, now undergoing trials, can run 3½ years between charges (*Medical World News*, 10 February, 1975).

"There are no significant benefits that would be derived from the use of the plutonium powered pacemaker," while plutonium offers serious environmental hazards, warned Professor Dean Abrahamson in a report issued early this year. Abrahamson is a medical doctor and professor at the Minnesota University School of Public Affairs. He was responding to a draft environmental statement on plutonium pacemakers issued in January by the US Atomic Energy Commission.

The first hazard is to the wearers themselves. Harwell estimates that the average whole body radiation dose will be 0.18 rem/year about 1½ times the natural background radiation. But the dose to nearby organs is much larger - the heart for example, will get 1.1 rem/year. One radiation expert, Professor Donald Geeseman of the Minnesota University School of Public Affairs, warned in his submission on the AEC draft environmental statement that "when a protracted dose of this magnitude is delivered to a localised and disturbed tissue region in young patients, a substantial incidence of cancers should be expected unless the contiguous tissue has no carcinogenic potential".



Harwell nuclear-powered pacemaker

The second hazard is that the material might escape from the pacemaker. <sup>238</sup>Pu, and especially <sup>239</sup>Pu to which it decays, are exceedingly toxic. The USAEC draft environmental report estimates that even with strict precautions, decontamination due to leaks will cost \$21 000 per year per 10 000 pacemakers. But some experts consider this a conservative estimate, because a few particles of plutonium are undetectable. When plutonium from two bombs was scattered at Palomares, Spain, dirt was actually shipped back to the US. Thus a spill in a building might require carefully pulling it down.

The nuclear industry clearly recognises the danger of plutonium. Pacemakers satisfy strict safety standards set by the OECD Nuclear Energy Agency last year. These include withstanding 1300°C for 90 minutes (the equivalent of cremation) and a crushing by 1000 kg.

But the decision as to what accidents to protect against is based on statistical risk assessment. For example, the hazard of penetrations by a bullet or by debris from an explosion is so low that it "may be discounted", according to the OECD Nuclear Energy Agency guidelines. But as Abrahamson notes, one US nuclear pacemaker patient was shot dead as the innocent bystander in a hold-up.

A greater threat is presented by terrorists, criminals, and lunatics. The three curies of plutonium in one pacemaker could go a long way, especially if released in a city centre. The devices must be stored in hospitals before they are implanted, and they must be removed from the patient, stored, and (supposedly) returned to Harwell after he or she dies, leaving ample opportunity for theft. Similar material has already been stolen. In California alone, 21 capsules of iodine-131 were stolen from a hospital in Arcadia, radioactive needles used in cancer therapy were taken from a hospital in Modesta, and last summer police discovered what they described as a "huge cache of radioactive materials" in a flat in Berkeley.

In the US, a report was published clandestinely showing how to set up a simple glove box and dissolve the pacemaker core in acid to extract plutonium bicarbonate. To be sure, this requires someone who is both foolhardy and has some limited chemistry skills. But there have already been two incidents of nuclear terrorism - both in the summer of 1974: a man spread iodine-131 in carriages of the Vienna-Rome express, and the head of Italy's secret police planned to pollute aqueducts with stolen radioactive material to cause panic during an intended right-wing coup.

The chances of such incidents may be slight, but they are not negligible. Which raises the question of why such a toxic and dangerous material should be spread around the world in a virtually uncontrolled way when much less dangerous alternatives are available.

Michael Flood  
Friends of the Earth

## PLUTONIUM 238 PACEMAKER, THE PLUTONIUM MIGHT ESCAPE

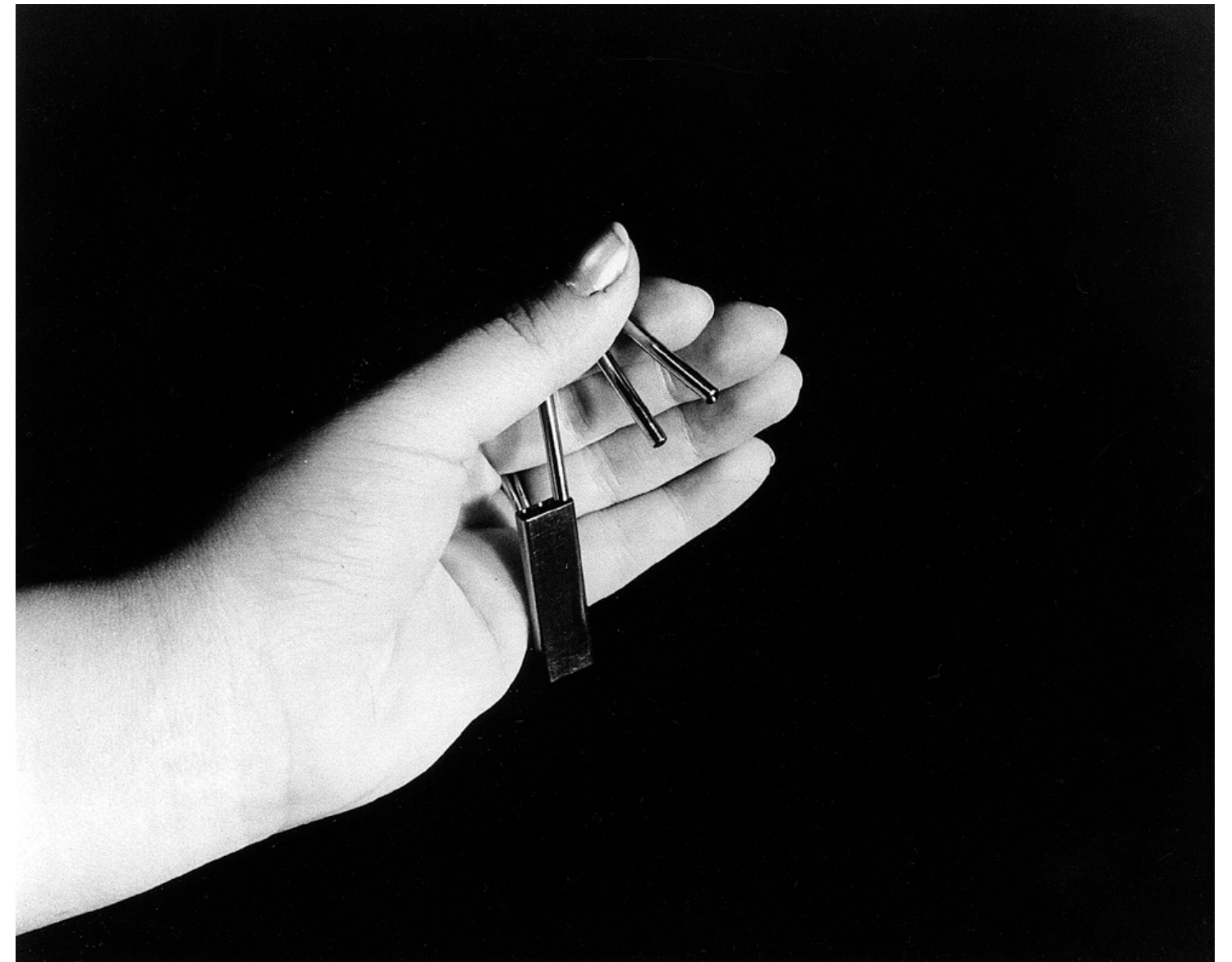
P.733.FLP



'HD.17.048', viewed 02.12.2015, <http://www.goivwith.com/photos/37916456@N02/11950782144>

# PLUTONIUM 238 PACEMAKER, G.H. DISPLAYS A NUCLEAR HEART PACEMAKER

P.733.GHP



'HD.17.055', viewed 02.12.2015, <http://www.goivwith.com/photos/37916456@N02/11951416496>

[< previous page] It's 1973. The shiny canister [M20] in Miss Gayle Hood's left hand is a plutonium-powered pacemaker. Between the index finger and thumb of her right hand she holds a lead [E19]: the wire that establishes the connection between the device and the atrioventricular node of the heart.

transcript of a telephone conversation\*  
on Friday 8.12.2017 10:06 - 10:21

**M.D.C.:** 'Hello, this is Michiel De Cleene.'

**B.T.:** 'Good morning, you are talking to B.T. of Belgoprocess.'

**M.D.C.:** 'Good morning, mister B.T.'

**B.T.:** 'I am calling you with some inconvenient news. About two years ago you contacted us with the request to photograph the processing of a nuclear powered pacemaker in our facilities.'

**M.D.C.:** 'Yes, an explanted plutonium-powered R9000 pacemaker.'

**B.T.:** 'Indeed. As you know we are working on the documents and approvals for your access. This is a slow and cumbersome process; especially since you are not professionally trained to work in the neighbourhood

of radiation. However, after some calls and some correspondence with the Federal Agency for Nuclear Control, my hopes are your access to our facilities will be approved.'

**M.D.C.:** 'That's great news.'

**B.T.:** 'We'll have to wait it out, but I agree this seems to be good news. The inconvenient news, however, is that I received a call some minutes ago from our operational branch. They told me one of our processing devices is in need of unexpected and unplanned service and maintenance. Therefore we need to make some changes to our schedule, the result is that we are obliged to start processing the collection of sources of which the pacemaker is a part. More specifically, this means that we are processing the nuclear pacemaker next Monday. As you will understand, it is impossible to

\* Conversation in Dutch, translated.

# PLUTONIUM 238 PACEMAKER, TRANSCRIPT OF A TELEPHONE CONVERSATION

P.733.HBL



'HD.17.037', viewed 02.12.2015, <http://www.goivwith.com/photos/37916456@N02/11950650426>

organize your clearance at such short notice. I am very sorry to have to tell you that you will not be present when we process the pacemaker.'

**M.D.C.:** 'I am very sorry to hear that, but of course I understand that the processing of these devices can not be delayed or halted.'

**B.T.:** 'Indeed. What I propose we do is the following: the approval for your clearance is pending, we let this process take its course and hopefully you receive the needed clearance, if so, maybe you could still visit the facility and if you'd want to, you could still make photographs then. However for the urgent matter of the pacemaker I have another possible solution. We often work with a colleague of yours who has already had a short training by us and who has the right clearance to

work within our facilities. If this could work for you, I could ask him to be here on Monday and photograph the entire trajectory of the pacemaker from building to building and throughout the processing. Afterwards, we could send you the pictures and you can use them in your documentary. I know this is far from ideal, but it is the absolute maximum of what we can do. I have to mention we'd probably use the pictures ourselves in our annual report and probably also in an article on our website to prove our social relevance.'

**M.D.C.:** 'Of course, no problem at all. Thank you for trying to solve this so urgently.'

**B.T.:** 'You're more than welcome, but do you think this could work for you?'

**M.D.C.:** 'As you said, this is the absolute maximum, so

## PLUTONIUM 238 PACEMAKER, BATTERY

P.733.HBT



'HD.17.051', viewed 02.12.2015, <http://www.goivwith.com/photos/37916456@N02/11950696403>

'Little notice was taken of the presence of surgical hardware post mortem until September 1976, when the mercury zinc batteries in a pacemaker left in a body exploded during cremation with force sufficient to damage the brickwork lining of the cremation chamber.\* Following this first recorded blast numerous pacemakers have detonated as a consequence of exposure to the extreme heat inside the cremation chamber. Some sources claim that furnace-doors have been blown off by the sudden explosion of an overlooked pacemaker.

At times pacemakers go astray. Doctors palpate and fill in forms, undertakers query relatives and examine the body. Yet, accidents occur. In order to battle the scarce phenomenon of the migrating pacemaker,\*\* undertakers increasingly employ hand-held metal detectors to scan the deceased's body.

I am very happy with this solution and that there will at least be photographs of the process. Of course I would have preferred to be there myself, but I fully understand this is impossible.'

**B.T.:** 'Yes, there is nothing more we can do.'

**M.D.C.:** 'Okay.'

**B.T.:** 'Now, I have seen some of your photographs in a television broadcast, and I was wondering if you

\* Hidden Hazards of Cremation, British Medical Journal, 24-31 December 1977, p. 1620-1621

\*\* Gale, C.P., Mulley, G.P., A Migrating Pacemaker, Postgraduate Medical Journal, 2005; volume 81, issue 953, p.198-199

## PLUTONIUM 238 PACEMAKER, THE CREMATORIUM AS A DIRTY BOMB

P.733.KDB





'HD.17.050', viewed 02.12.2015, <http://www.gettyimages.com/photos/37916456@N02/11950695673>

June 14, 2014. A plutonium 238 pacemaker was found in the offices of a Belgian waste disposal company. Who left it there and – presumably – forgot about the nuclear device, is unclear. After three years of lying idly in a cupboard and nearly forty years after its construction, the device is still functioning, counting the milliseconds between its pulses.

could tell me what it is you would photograph if you would be here, so I can brief the other photographer.'  
**M.D.C.:** 'That's a very hard question since I know what a pacemaker looks like, but I don't know what the process and the devices involved look like at all. I can imagine there is an interesting play of scales at work between the pacemaker which is hardly the size of a match box and the operator handling it, the large corridors it travels through and the – I imagine – enormous machines and buildings this all happens in. So it's very hard for me to tell you what I would photograph...'

**B.T.:** 'Let me shortly explain the trajectory and the process that will happen on Monday. The source – that's what we call any object that is being processed at our facility – is sealed and stored in a 30 liter metal drum inside a room of the former research building. On Monday

the operators will collect the drum and transport it through narrow hallways – with a high X-files character, if you ask me. They will then cautiously bring it to a truck where they will carefully secure it. Then the truck drives about 500 metres to the processing building CILVA. The doors open and the truck enters. The metal drum is unloaded from the truck and brought to a room. In that room: another room, completely made of steel. Photography is impossible here, since anyone and anything that enters has to be entirely covered; operators wear a full mask and use breathing devices. Anything that leaves the room is subjected to a strict control and measurement of the radiation levels. Bringing a camera here is not an option. The operators will open the 30 liter drum, they will take out the pacemaker and place it in a designated metal

## PLUTONIUM 238 PACEMAKER, LEFT IN A CUPBOARD

P.733.LIC

Still from a television broadcast from 12.11.1988, uploaded to youtube.com by INA Sciences (Institut National de l'Audiovisuel), on 09.07.2012, viewed 06.10.2015, <https://www.youtube.com/watch?v=89YcmIHHK8>



[a middleaged man, grey suit, green tie sits in a television studio. The man is positioned to the right side of the screen. On the left: a still image of two surgeons at work. The man in the grey suit looks into the camera.]

Mesdames, messieurs, bonjour,

Un cœur nucléaire: c'est une première chirurgicale aux Etats-Unis. Un malade a été doté d'une pile cardiaque, un système classique, mais ce qui est nouveau donc, c'est l'alimentation de cette pile à l'énergie nucléaire. L'avantage essentielle réside dans le temps de

fonctionnement de cette pile: quarante ans contre dix actuellement. Patrice Velay:

[the scene cuts from the television studio to a shot of a man with a grey shirt, a dark red sweater, curly hair and a moustache. On his shirt he wears a brass pin. Behind him, a man with a beard wearing a lab coat]. Oh yes, I was [overdubbed from this moment on] Le nucléaire au service de la vie, un nouveau stimulateur pour cet Américain de 47 ans, plus de soucis pour son cœur avant 30 ou 40 ans.

[from this point on: a succession of images showing a close-up of the pacemaker on a table, the pacemaker's lead between thumb and index finger of a man, the same man holding the pacemaker and the leads in both hands. The man wears a blue shirt and a brass-coloured watch. Two surgeons and an anaesthetist standing around the patient, the surgeon's blood-covered, gloved hands, two surgeons leaning over the patient, a close-up of the pacemaker in gloved hands, again two surgeons leaning over the patient and a close up of the pacemaker being pushed into the patient's body by two gloved hands,

container with prepared layers of concrete in it. When this container is properly sealed, marked and documented, it travels to another building where we store it. That's Monday's schedule.'

**M.D.C.:** 'As I mentioned I am interested in the fact that this small device is inside a container, inside a room, inside a building, it has to travel by truck to another large building, to enter a steel box, to later on travel to yet another massive building. The whole concept

of scale involved in this process would interest me a lot. But what I find even more interesting...'

**B.T.:** 'Don't expect too much of the truck, we only transport the pacemaker on our premises, never over public roads, so it's just a regular, day-to-day truck. But I interrupted you, please continue.'

**M.D.C.:** 'I was saying that what I find even more interesting than this question of scale is the unphotographable nature of it all. The invisibility of radiation

## PLUTONIUM 238 PACEMAKER, IN A SURGEON'S HANDS

P.733.OPS

see next page



Still from a television broadcast from 12.11.1988, uploaded to youtube.com by INA Sciences (Institut National de l'Audiovisuel) on 09.07.2012, viewed 06.10.2015, <https://www.youtube.com/watch?v=89YCMHFK8>

a close-up of the surgeon's masked face. He is concentrating on the task at hand. He wears glasses.]  
La pile magique fonctionne au plutonium radioactif, elle produit une double impulsion qui stimule les deux parties du cœur. Un progrès car jusqu'à présent la pile nucléaire ne pouvait pas lier toutes les insuffisances cardiaques. C'est pourquoi dans les hôpitaux les équipes médicales préféreraient le plus souvent les piles classiques. Leur seul défaut: un remplacement obligatoire tous les sept ou huit ans.

Parsonnet, a bald, somewhat stern looking man in a lab coat, het talks into a handheld microphone, his voice is overdubbed.]

L'avantage de ce nouveau stimulateur nucléaire c'est qu'il dura au moins aussi longtemps que l'espérance de vie du patient. Cela permet donc d'éviter au malade une opération chirurgicale supplémentaire pour changer la pile. Et ce procédé ne comporte aucun risque, puisque les radiations sont infimes. Ce nouveau pacemaker Américain coute six mille dollar, environ 36 mille francs. C'est 25% plus cher qu'un pacemaker

classique, mais un procédé rentable puisqu'on évite ainsi toutes nouvelles opérations sur le malade.

[a succession of images showing a pacemaker in someone's hand, a close-up of a pacemaker on a table followed by a quick zooming out, widening the image and showing a press-conference with a plastic heart on the table, some microphones, Dr. Parsonnet talking, three men in brown suits, a woman in the back, on the left side of the frame: the man with the beard and lab coat, the succession of images ends with an image of the surgeons in the theatre.]

appears to be mirrored in the entire process. Again, it is hard to imagine a documentary beforehand... but the unphotographable and the attempt to cope with this as a photographer would probably become a subject in its own right. This could manifest itself by photographing the trajectory within the broader scope of the architecture and the surrounding landscape, or by photographing the operators while they are putting on the overalls, the masks and the

breathing devices; implying the process instead of showing it.'

B.T.: 'You mentioned photographing the buildings and the broader landscape in an attempt to cope with the unphotographable. I understand what you are trying to do, but this is a problematic approach. Our facilities are subject to severe security-measures and one of those measures is to restrict the photographic and visual representation of the

## PLUTONIUM 238 PACEMAKER, IN A SURGEON'S HANDS

P.733.OPS



Photograph by Bonsai Publication bureau, commissioned by Belgoprocess to document the processing of an explanted plutonium 238 cardiac pacemaker on 11.12.2017

premises to an absolute minimum. So even if you would try to photograph a building or a landscape, chances are there will be something in the frame that you are not allowed to photograph: a camera, a fence, a device, a certain building...'

M.D.C.: 'I didn't take that into account. But again, these restrictions are an interesting subject in their own right and could very well function as a protocol for the photographs to be made.'

B.T.: 'Anyway, I will try to convey this information and your approach to your colleague.'

M.D.C.: 'Thank you very much for all the effort. Thinking about it, maybe it is a possibility to photograph a similar process in the future? If I get the clearance from the Federal Agency of Nuclear Control, maybe I could still photograph the locations or even the same process but with another device? It wouldn't be the pacemaker, but it would still be about the pacemaker.'

B.T.: 'Yes, that could be an interesting option.'

M.D.C.: 'I think that could be a very good alternative to Monday.'

B.T.: 'I hope you don't mind me asking, but what is the importance of you making the photographs? Do you feel like your account of the process would be in anyway better, more documentary than what your colleague would make?'

M.D.C.: '...I guess it has something to do with being present, with being there myself. I think it's the whole concept of proximity and of witnessing the subject, of coming as close as possible, even to something I couldn't photograph. Perhaps, a kind of reliance on the truthfulness of ...'

B.T.: 'I think I understand'

M.D.C.: '...and another important reason for wanting to be there myself is that in the entries on nuclear pacemakers I have had to resort to found material. Although I find it striking that this subject is photographically as elusive as the technology itself, I would like to break with this tendency to lean solely on archival material.'

B.T.: 'Okay, well, for now let us proceed with the proposed solution and we will see what possibilities the future brings.'

M.D.C.: 'Yes, that would be great, thank you.'

B.T.: 'Okay, good.'

M.D.C.: 'Thank you again and I'm looking forward to hearing from you in the nearby future.'

B.T.: 'You are more than welcome, I'll be in touch, goodbye.'

## PLUTONIUM 238 PACEMAKER, AS RADIOACTIVE WASTE

P.733.PRP

see next page



Photograph by Bonsai Publicatiebureau, commissioned by Belgoprocess to document the processing of an explanted plutonium 238 cardiac pacemaker on 11.12.2017

## PLUTONIUM 238 PACEMAKER, AS RADIOACTIVE WASTE

P.733.PRP

see next page



[04.04.2018]  
[Belgoprocess, site 1]

[B.T. and M.D.C. sit at B.T.'s desk]  
[B.T. is calling a colleague\*]

- 'Hi, this is B.T. I'm calling concerning the pacemaker, you remember that? ... I'm here with a photographer who would like to photograph the location where it is stored. ... Yes, I know, photographs were taken, but my question to you is: where is it now? ... Okay, I will call him.'

[on the phone]

- 'Good morning, this is B.T., I have a question, the pacemaker, do you remember that? ... Do you have any idea of its whereabouts? ... Building 155? ... Wait a second, I'll put it on speakerphone ... So building 155 you say?'  
- 'Yes, at the time when the other photographs were made, we transported the source from building 10 to

the processing building. We placed the pacemaker in a 200l barrel with sand and afterwards added more dry sand to fill up any cavity.'

- 'Yes.'  
- 'Then we placed this barrel inside a 400l barrel, equally spaced from every side, poured concrete into the barrel and let it dry for 3 days.'  
- 'Concrete or mortar?'  
- 'Ehm, yes, mortar. But that's not my field of expertise.'  
- 'Okay.'  
- 'Then, because this is a barrel with sources, it can not – by definition – be destined for disposal on the surface because of the intrusion scenario: if someone would at some point put a drill to the building, it could by chance hit the pacemaker... Therefore a source like this plutonium pacemaker is destined for geological disposal, so the barrel was transferred to building 155 in anticipation of a solution.'  
- 'There it sits with the other alpha-waste?'  
- 'Yes.'  
- 'Thank you.'  
- 'Bye.'

\* All conversation in Dutch, translated.

## PLUTONIUM 238 PACEMAKER, AS RADIOACTIVE WASTE [CILVA]

P.733.PRP

see next page



**B.T.:** 'The trajectory of the pacemaker on our plant has been as follows: temporary storage in building 10, processing in CILVA and temporary storage in anticipation of geological disposal in building 155. As you may know, Belgium no longer utilizes sea disposal and lacks a geological alternative for long-lived isotopes.'

**M.D.C.:** 'So the pacemaker will be here until there is a solution for the geological disposal?'

**B.T.:** 'Indeed. The temporary nature of the storage at our facilities is being stretched beyond what one could reasonably call temporary.'

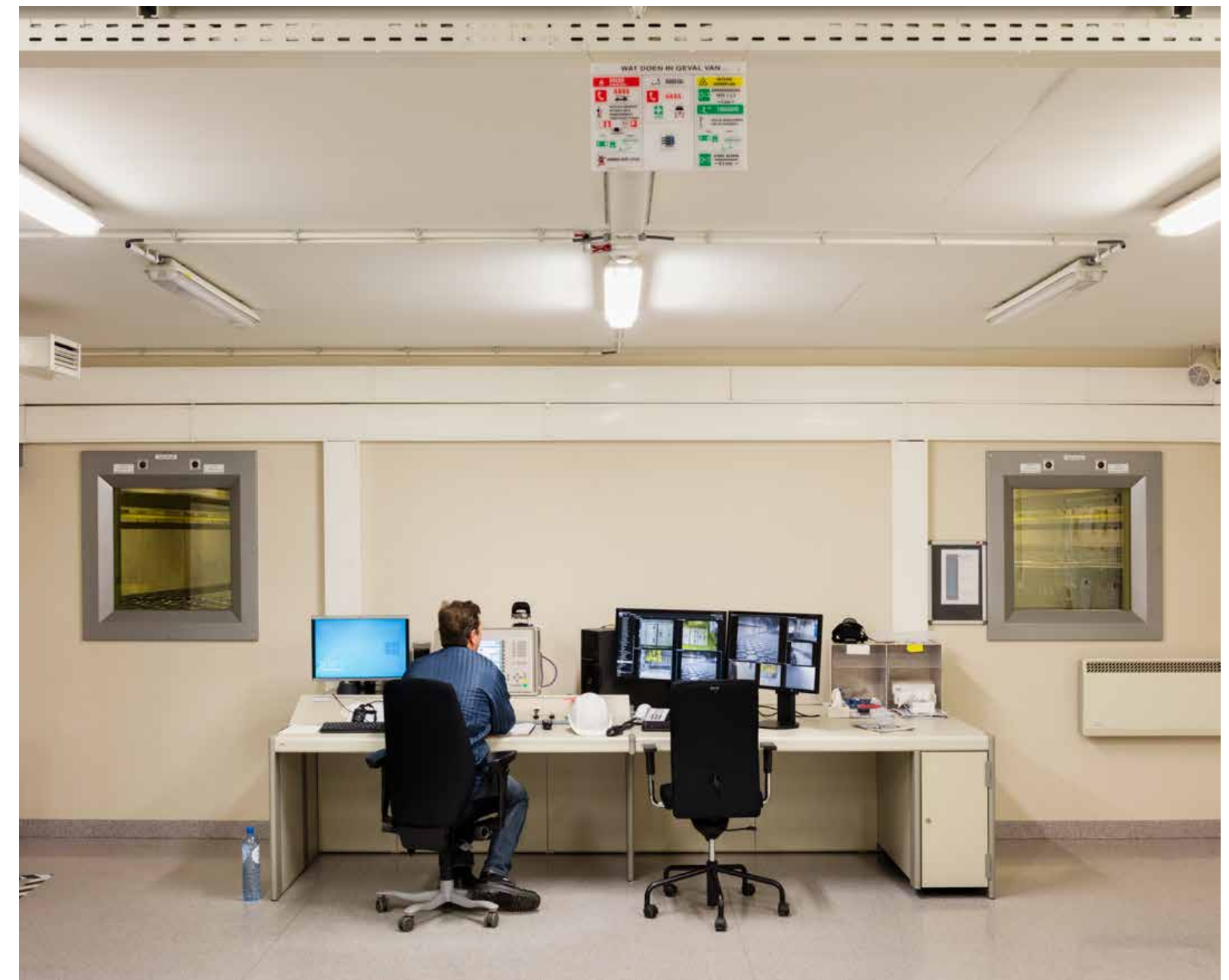
**M.D.C.:** 'How long will it stay here?'

**B.T.:** 'Due to delays, the pacemaker will be here for at least the next forty years. But of course for this kind of device, such an amount of time is miniscule. Plutonium 238 has a half-life of 88 years and decays into uranium with a half-life of 243 000 years.'

**M.D.C.:** 'All this time the device functions inside its container of sand and mortar?'

**B.T.:** 'Yes, as long as the plutonium battery doesn't run out, and there is no reason to believe it will anytime soon, I guess it will keep functioning. I propose we take a walk to see the different places where this pacemaker has been.'

## PLUTONIUM 238 PACEMAKER, AS RADIOACTIVE WASTE [BUILDING 155]



[walking from the processing building to the temporary storage building where the pacemaker sits, B.T. and M.D.C. walk past the plant's central chimney]

**B.T.:** 'On the highest of the accessible levels of the chimney, operators were finding small steel rings. They gathered them, but soon noticed that new rings were added. At a certain point at a rate of one ring a day.'

[...]

It took them some time to realize what they were, so they started collecting them by slipping them onto a piece of rope. By now the rings on the rope span about this distance.

[spreads his arms to indicate a distance of about 1.2m]

[...]

They turned out to be rings that come from pigeon's legs.

[...]

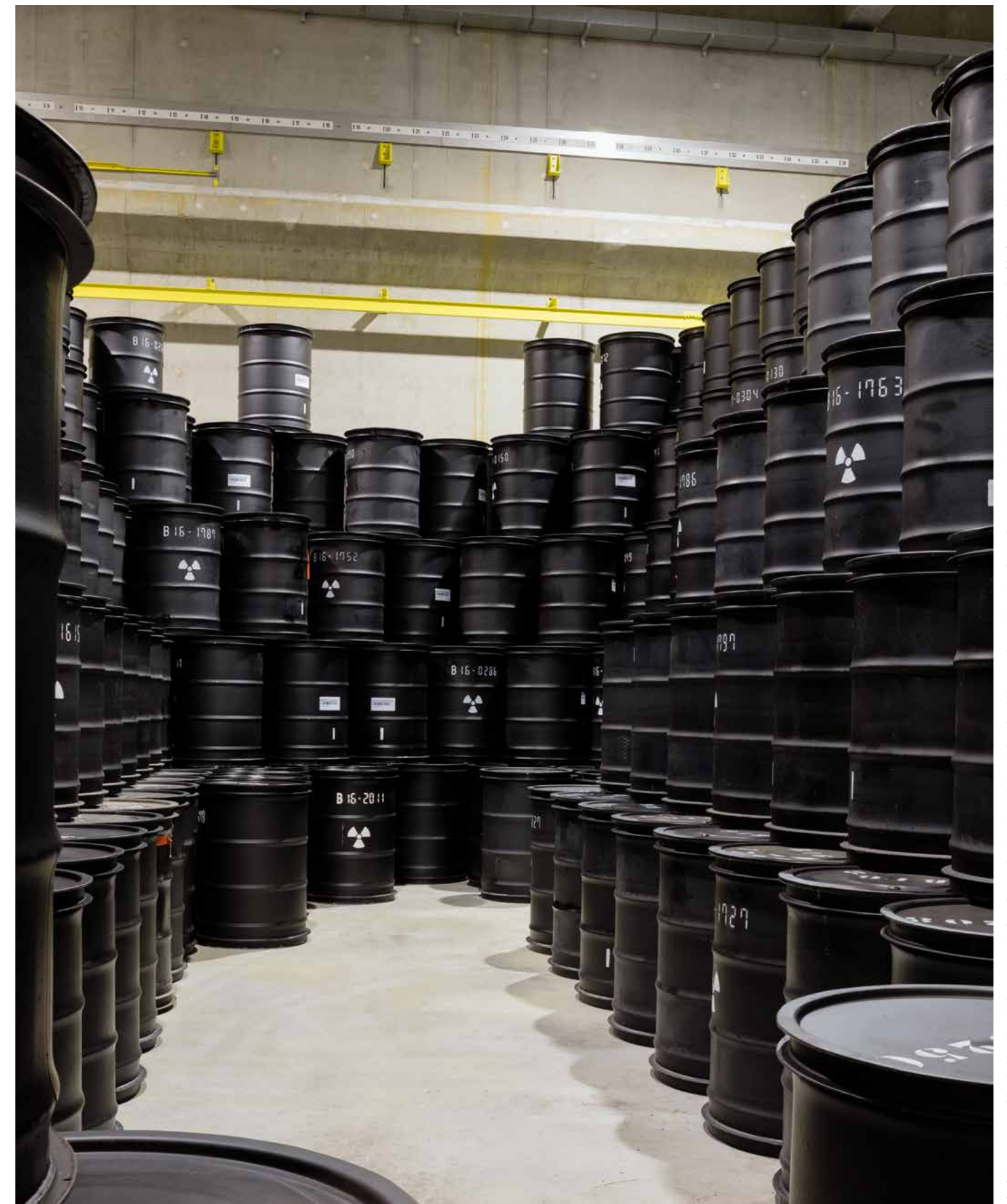
## PLUTONIUM 238 PACEMAKER, AS RADIOACTIVE WASTE [BUILDING 155]



**PLUTONIUM 238 PACEMAKER  
AS RADIOACTIVE WASTE,  
[CILVA, CEMENTING MACHINE]**

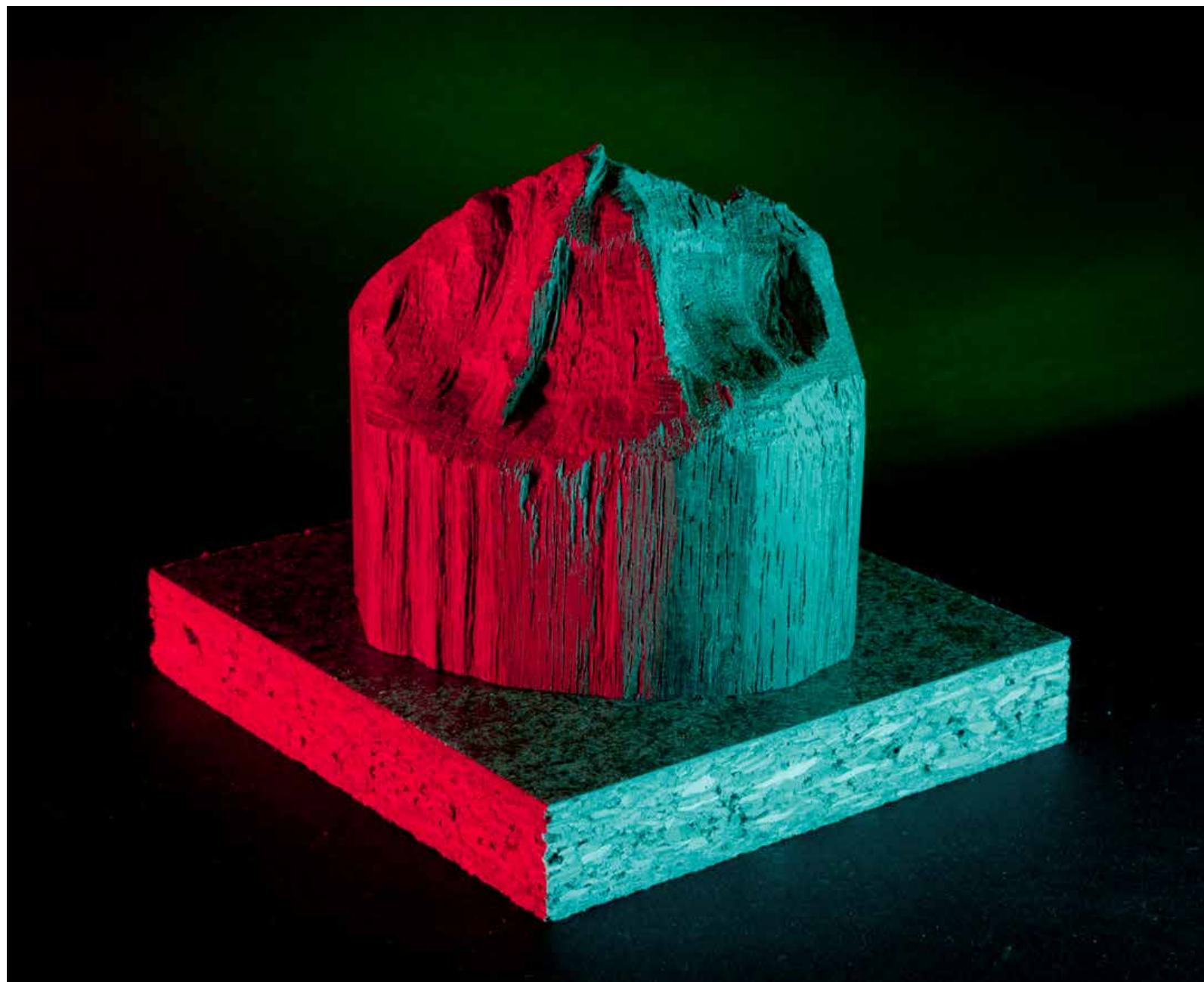
P.733.PRP

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**PLUTONIUM 238 PACEMAKER,  
AS RADIOACTIVE WASTE [BUILDING 155]**

P.733.PRP



Fall, 1965. A radio-interceptor, powered by a nuclear battery, is carried up the mountain. The device is deployed to spy on China's missile tests from the glacier-covered Himalayan peak of Nanda Devi.

A severe snowstorm. High winds, low visibility.

## A LOST NUCLEAR-POWERED LISTENING DEVICE ON NANDA DEVI

R.957.NAD

see next page



The team thoroughly secures the device to the face of the mountain and abandons it. In the following spring an expedition returns, only to discover the device has vanished along with the section of the mountain it was attached to.

## A LOST NUCLEAR-POWERED LISTENING DEVICE ON NANDA DEVI

R.957.NAD

see next page



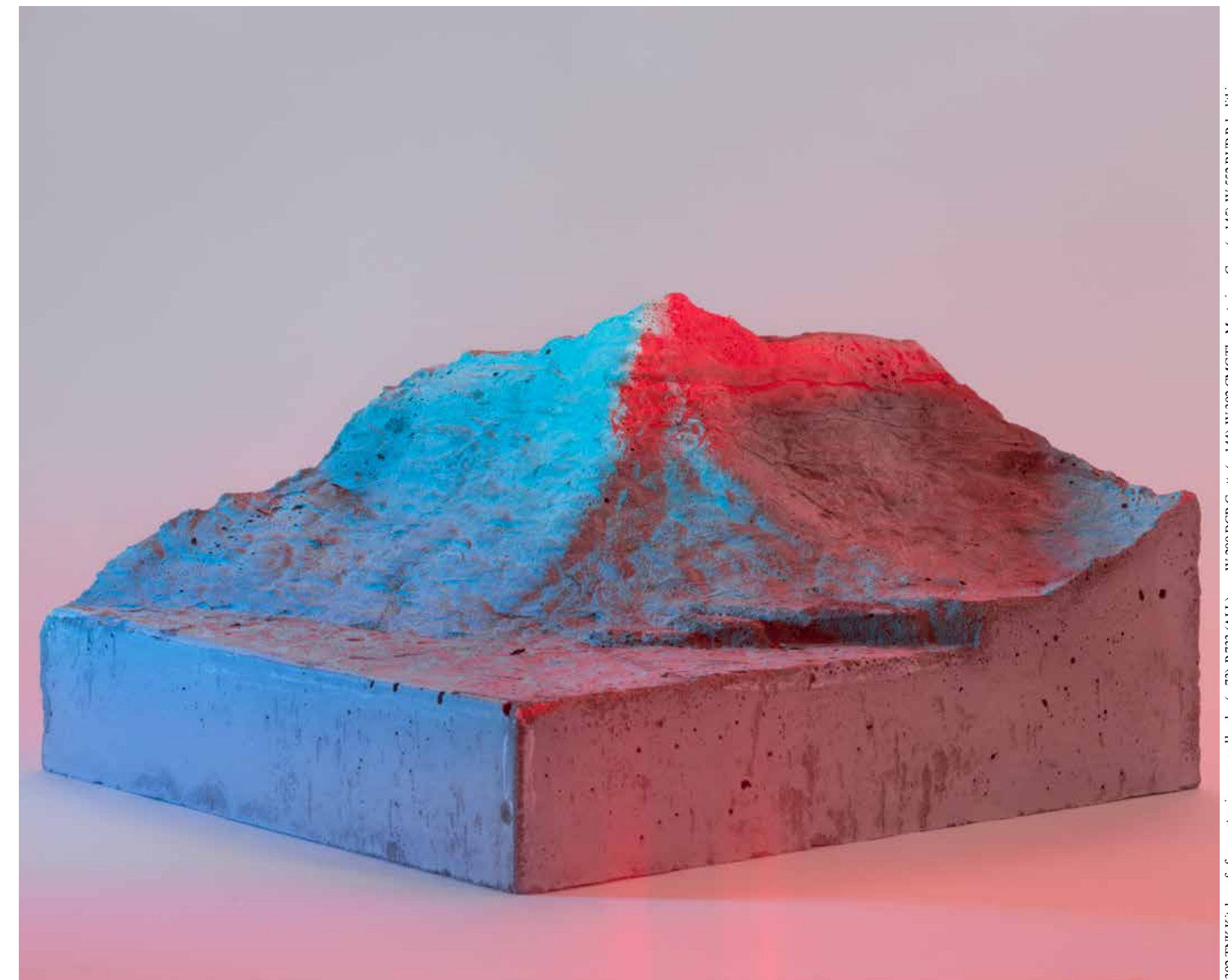
Subsequent expeditions fail to locate it. The battery, an alloy of plutonium and strontium: Pu-238, Pu-239, and Sr-90, is most likely entombed on the southwestern slope of Nanda Devi.

This side of the mountain is a major source of headwater for the Ganges. Apart from an eight year period (1974-1982), the mountainside has been closed since the incident. Experts disagree on the consequences of a possible leak. Some say the dilution-factor would be so great the material would have no effect. Others state life along the Ganges is in danger.

## A LOST NUCLEAR-POWERED LISTENING DEVICE ON NANDA DEVI

R.957.NAD

see next page



A year later on the neighbouring Nanda Kot, a similar device hollowed out a pristine cave in the snow: a five metre-wide, spherical grotto around a sweltering plutonium battery.

## A LOST NUCLEAR-POWERED LISTENING DEVICE ON NANDA DEVI

R.957.NAD

SEE ALSO: A.134 JAD Disappearance of Authenticity (p. 22-23), J.957 SJB Sant Juan Bautista (scale model) (p. 33), J.962 CKB Inside the crumbling keel of the Sant Juan Bautista (p. 46), L.463 ESH Mount Egaleo's shadow (p. 49), M.193 SDY Nuclear submarines queuing in Devonport Yard (p. 58-61), M.234 KLD KL.D. hiding as a means for conservation (p. 65-69), M.253 TER Telenor (p. 71), M.392 DST Dark structure in a former atomic command bunker (p. 72), M.392 TNK Kitchen of a former atomic command bunker (p. 73), P.733 (ALL) Plutonium 238 peacemaker, R.957 RRR Mount Robson's remarkable resemblance to Nanda Devi (p. 94-95), T.472 FSW Fisherman on Ishinomaki's sea wall (p. 109), T.495 PVI Ishinomaki, a panoramic view (p. 110-121), T.613 TPO Three people looking out over crumbling Mount Fuji at the Osawa failure (p. 124), W.299 BGR Grotto (p. 144), W.392 CMC The Mysterious Cave (p. 145), W.552 RUB Paleolithic caves hollowed out by the Kubicon, along the N666 (p. 146), W.568 CMS Cem, scale model on display in the CMS control cavern (p. 149), W.568 DUN Cem, DU NE (p. 150-152), W.569 EXC Cem, towards building 287, in search of excavation samples (p. 153-154), Y.863 VAY Cavity (p. 170)



- 'A lot of tourists today.'

- 'It's a great view.'

- 'It's like this all summer. But they don't know the half of it. They all think they are photographing Mount Robson: the highest peak in the Canadian Rocky Mountains. But there's more. The rumour goes it's a training ground.'

- 'For mountaineers?'

- 'Yeah... more or less. Mount Robson's south face has a remarkable resemblance with the Himalayan Nanda Devi's southwestern slope. Look it up.'

[...]

I know all mountains look like mountains, but something else is going on here. [looks around] I think this side of the mountain was conceived as a scale model of the Nanda Devi, you know, where they lost that plutonium battery in the sixties.

[...]

You see the second peak to the East? And the ridge between both summits? And the bowl underneath it? It's all the same.

[...]

I mean, look at the facts. Mount Robson's summit is at 3954m, the Nanda Devi's is at 7816m. That's no coincidence! Apart from a few meters that's exactly half as high. Believe what you want, but I'm pretty sure this is a 1:2 scale model that they used to practice for the expedition.'

- 'Are you saying Mount Robson is not a mountain but a building?'

- 'I'm saying it was shaped to look like something it isn't.'

## MOUNT ROBSON'S REMARKABLE RESEMBLANCE TO NANDA DEVI

R.957.RRR

see next page



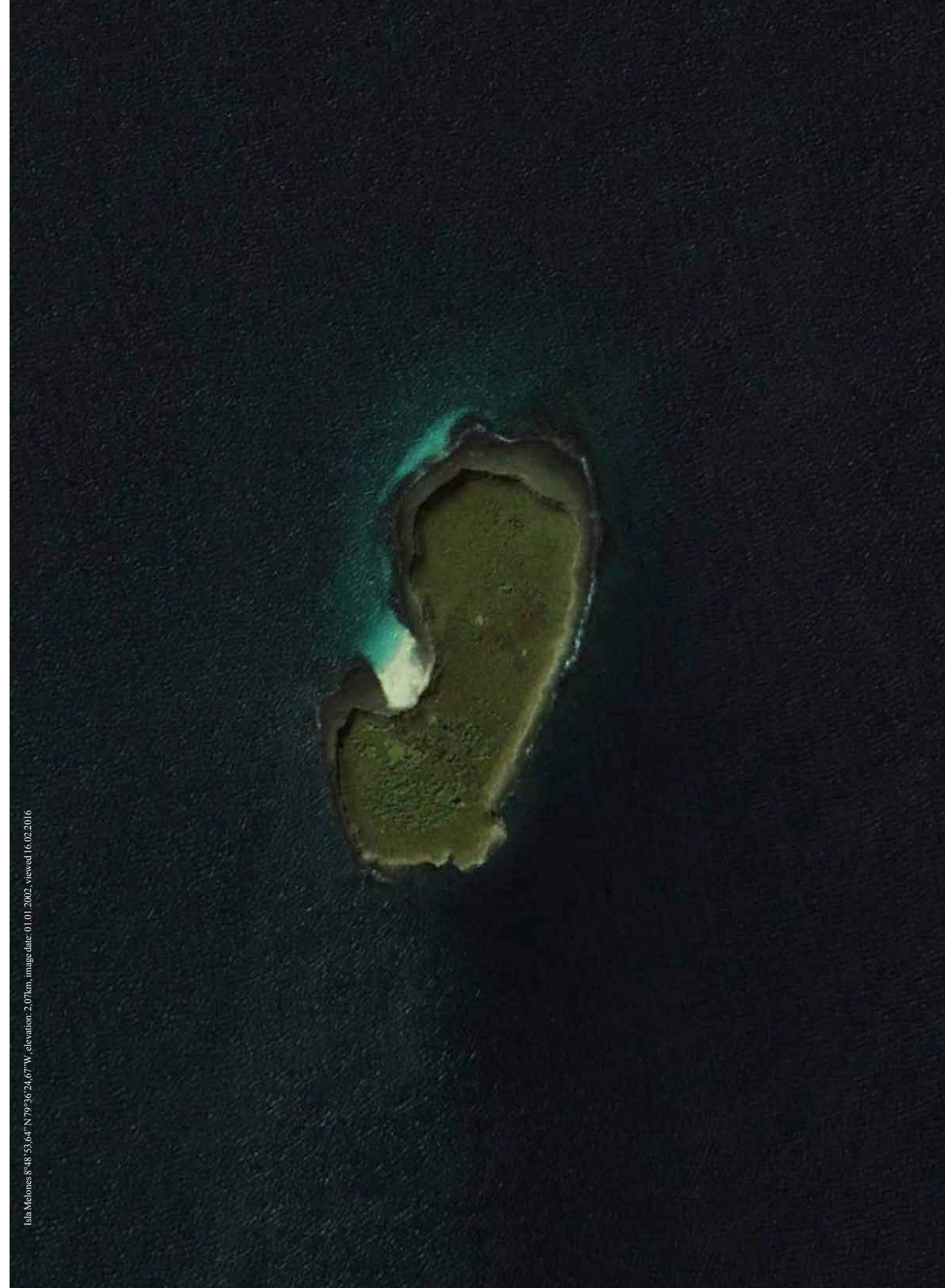
## MOUNT ROBSON'S REMARKABLE RESEMBLANCE TO NANDA DEVI

R.957.RRR





Isla Melones 8°48'53.64"N 79°36'24.67"W, elevation: 2,07km, image date: 01.01.1970, viewed 16.02.2016



Isla Melones 8°48'53.64"N 79°36'24.67"W, elevation: 2,07km, image date: 01.01.2002, viewed 16.02.2016



Isla Melones 8°48'53.64" N 79°36'24.67" W, elevation: 2,07km, image date: 01.05.2006, viewed 16.02.2016



Isla Melones 8°48'53.64" N 79°36'24.67" W, elevation: 2,07km, image date: 01.12.2009, viewed 16.02.2016



Isla Melones 8°48'53.64"N 79°36'24.67"W, elevation: 2.07km, image date: 01.03.2011, viewed 16.02.2016



Isla Melones 8°48'53.64"N 79°36'24.67"W, elevation: 2.07km, image date: 01.12.2011, viewed 16.02.2016



Isla Melones 8°48'53.64"N 79°36'24.67"W, elevation: 2.07km, image date: 01.04.2012, viewed 16.02.2016



Isla Melones 8°48'53.64"N 79°36'24.67"W, elevation: 2.07km, image date: 01.02.2013, viewed 16.02.2016



Isla Melones 8°48'53.64"N 79°36'24.67"W, elevation: 2,07km, image date: 01.04.2013, viewed 16.02.2016



Isla Melones 8°48'53.64"N 79°36'24.67"W, elevation: 2,07km, image date: 01.05.2013, viewed 16.02.2016



Isla Melones 8°48'53.64"N 79°36'24.67"W, elevation: 2.07km, image date: 01.01.2015, viewed 16.02.2016

Still from 'Pescia bahia de Panamá, Pampano, Jurel, Pargos, agujas', uploaded to youtube.com on 21.04.2015 by Luis Abbott, viewed 16.02.2016, <<https://www.youtube.com/watch?v=D6HUY9CmfPg>>



[<<<<<<<<<<<<< previous pages: photographs made in 1970, 2002, 2006, 2009, 2011, 2011, 2012, 2013, 2013, 2013, 2015]

Satellite photographs of Isla Melones (from where the Authenticity bunkers fuel) show a significant physical growth of the island in the period between 2009 and 2011. Since 2012 the island supports a complex of tanks, pumping stations and pipelines.

It is strategically located at about eight nautical miles from the Pacific end of the Panama Canal near the route of the ships transiting the interoceanic canal.

In 1992, Panama deregulated its petroleum markets to promote the bunkering business and established 'zonas libres de petroleo'. On a ZLP, such as Isla Melones, no income taxes are charged for all petroleum exports.

Image showing Isla Melones as seen from the water, still taken from 'Pescia bahia de Panamá, Pampano, Jurel, Pargos, agujas.'

Description: 'Dia de pesca gracias al amigo Roque y su papá Romeo. Excelentes monstruos. El capitan Miguel nos llevo a tener una excelente experiencia de pesca en la bahia de Panamá, cerca isla melones.'

1620 views

# ISLA MELONES, A GROWING ISLAND

S.715.ISM

SEE ALSO: A.132.ASF Fishermen in Aspropyrgos (p. 10), A.132.ASR.A.spropyrgos refinery (p. 12), A.132.EILA Fishermen in Elefisia (p. 13–14), A.134.JAD Disappearance of Authenticity (p. 22–23),

A.134.KWO Authenticity in Kiel Canal (25.02.2006) (p. 25), A.134.NZK Authenticity, Noordzeekanaal, anno 1983 (p. 26–28), L.769.PAC Port Alberni conversation (p. 53–57), S.913.CDA Cap of Antifer, deepwater

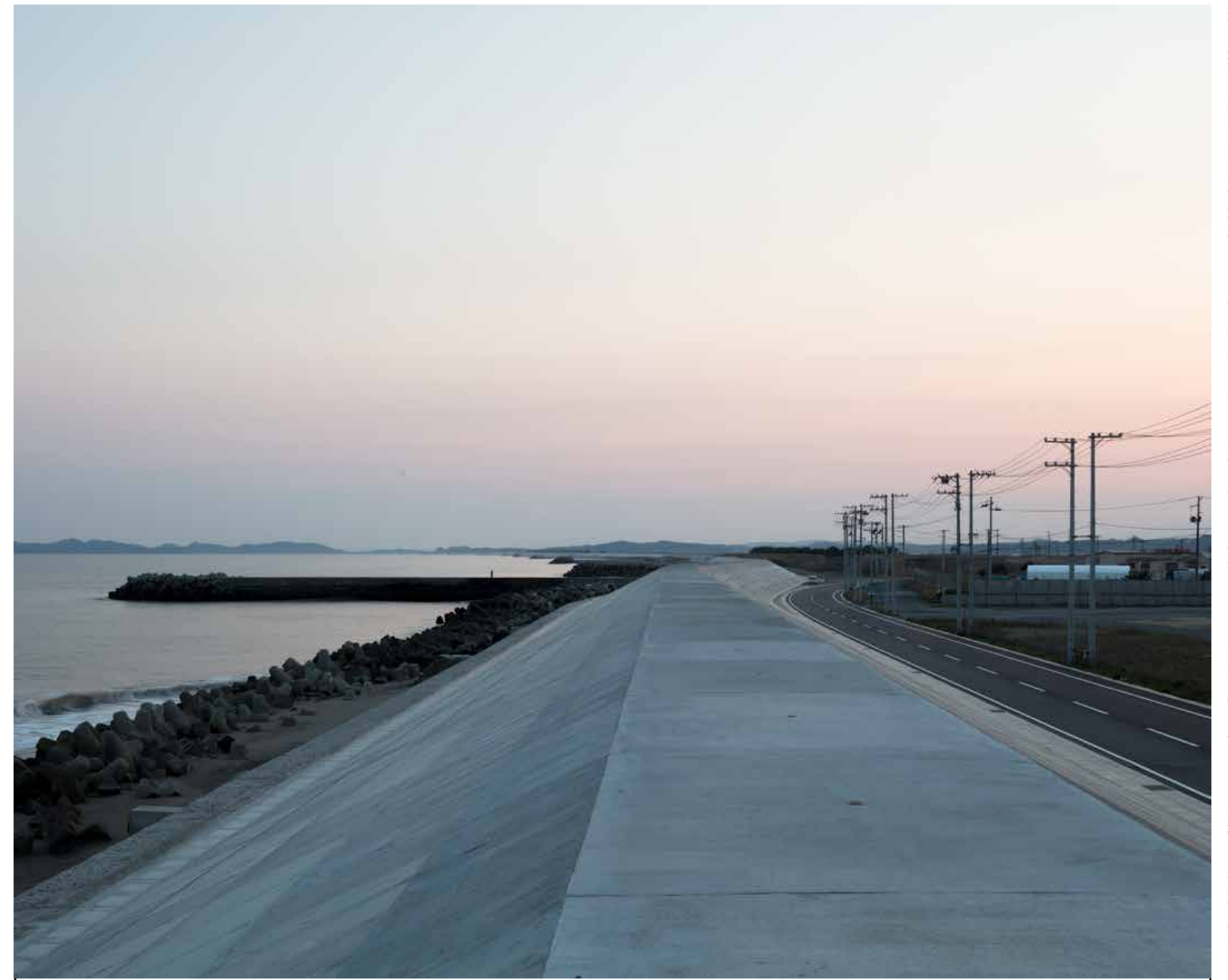
outpost (p. 108), T.472.FSW Fisherman on Istinonaki's sea wall (p. 109), T.495.PVI Istinonaki, panoramic view (p. 110–121), T.613.UOF Reinforcements along Mount Fuji, s'Ossawa failure (p. 125–127)



Between 1967 – the conquest of the Suez Canal by Israel during the Six Day War – and 1975 the Suez Canal was closed: the west bank was occupied by Egypt, the east bank by Israel. In order to get from the Middle East to Europe, oil tankers had to make a detour via the Cape of Good Hope. To monetize the trip, oil tankers with a far greater gauge were built (Ultra Large Crude Carriers). However, these were not able to enter some traditional ports. Deepwater outports, like the port of Cap d’Antifer, Normandy, France, were built. Since the reopening of the canal in 1975 these tankers ceased to be used. The outports are underutilized.

## CAP D’ANTIFER, DEEPWATER OUTPORT

S.913.CDA



[in Koichi Ohtsu’s car]  
[K.O. and M.D.C. are on their way to the Sant Juan Bautista museum for a talk with the curator, Ms. Nakazawa]

K.O.: ‘Let’s take a seaside route.

[...]

So the city, or, ehm, the prefecture – the central government – is going to make this [points to an immense wasteland along the coast with cranes, bulldozers and trucks] a peopleless, houseless area. All of the houses were washed away. They will turn it into a memorial park. In about five years. The original residents are scattered over various parts of the city and even the country. Very few of them want to come back.

[...]

They are bringing in soil to elevate the ground in the memorial park, to five or six metres. To act as

an emergency shelter. Where people can evacuate to. And this [points to the other side of the road] is the great wall. It was built to the height of the wave. This used to be a very nice beach where we often came when we were little.

[...]

It’s true that just after the 3.11 disaster the majority of the people were scared of the sea. But we don’t see it as a monster. Certainly, those people who lost their family don’t want to look at the sea. It reminds them of a very sad episode. But we have to depend upon the sea, our main industry is the fishery and the marine food processing industry. For me, the sea is exactly as it was. Except for the great wall that bars my view. The sea wall is structurally and functionally fine, probably essential. But many people feel very stressful. What happens beyond these walls is invisible. It makes them nervous and anxious.

[...]

We’re a bit early, we can stop for lunch.’

## FISHERMAN ON ISHINOMAKI’S SEA WALL

T.472.FSW



## ISHINOMAKI, A PANORAMIC VIEW [I]

T.495.PVI

see next page



Fragments taken from several conversations\* with Ishinomaki residents. Conversations are based on the panoramic view on the opposite pages [I-VI].

'I was at my house.'

[she orders a tomato juice]

'Ehm, ten minutes away by car,' she says.  
'The water approached my house but stopped at 200 metres from my doorstep. It wasn't really a wave, it was just water, very shallow.'

'It wasn't black,' she says. 'Nothing like what you saw on television. The dirt of ages settled kilometres from here. No helicopters and cameras,' she says.

'The sight was, in a way, less dramatic, I imagine.'

'Closer to the sea, the dirt was one of the biggest problems to deal with in the aftermath of the disaster. The whole floor, the ocean bed was mixed up. Very old stuff. For a long, long time things accumulated at the bottom of the ocean. It was stirred up by the strong earthquake and tsunami. The ocean brought terrible, pitch black dirt. The water pulled back, but the dirt stayed. It was like charcoal. Centuries of accumulation, deposited in the streets, houses, stores.'

\* Conversation in English and Japanese. Only K.O.'s translation of fragments from Japanese is included in the text.

## ISHINOMAKI, A PANORAMIC VIEW

T.495.PVI

see next page





## ISHINOMAKI, A PANORAMIC VIEW [III]

T.495.PVI

see next page

'My house is about here [IV E16] I arrived at my house just after 2 p.m. and the earthquake happened at 2:46 p.m. I was with my mother. I supported her. I had no time to go out.

It was evening when I looked at the sky and saw smoke. A red sky in the Southern direction and I didn't know what happened. I walked to Hiyoriyama hill\*. On the way there, I saw this area [the location where they are now making the memorial park, [II E-Q17, G-P18]]. The most devastated area. The houses were burning. Later, I learned why.

It was cold in the middle of March so people were using kerosene stoves. It was still a little early for cooking time, but it was practically winter and getting dark.

There's a gas station.  
Here and there.  
The fire just spread.  
Inextinguishable.

And from the top of the hill I saw that the burning houses were floating and were turning round and round in this part of the city [II L17]. The burning houses were like floating candles as it became dark, a maelstrom of fire.

I was there [II U16], I was witnessing all this.

The people gradually came out the next day and it turned out to be a very beautiful day. Beautiful morning, clear sky.

Then I bumped into a helmeted newscaster of USA Today. And that elderly lady, ehm, just put the mic towards me and "could you just tell me what you saw and so and so" she said. But I was a little taken by surprise, so I couldn't talk properly. But it went online... I don't think it's still there.'

[in K.O.'s living room, playing him the field recording of a conversation M.D.C. had with a man on a hill while looking for a suitable vantage point to photograph Ishinomaki]

M.D.C.: 'He was talking to me and I made a quick recording. I met him in a forest while he was picking young ferns.'  
K.O.: 'Oh yes, the sprouts. Spring sprouts. Very delicious.'

[M.D.C. plays K.O. the recording]  
[birds in the background]  
[wind in the microphone]

M.D.C.: 'Do you think you could translate it?'  
K.O.: 'Could you play it again, from the beginning?'

[M.D.C. plays K.O. the recording again, from the beginning]

K.O.: 'Well, the, he says first that there ehm, that he lives down the hill. You have recorded his voice on a hill?'

M.D.C.: 'Yes.'  
K.O.: 'He says that he lives down the hill and, ehm, he moved here, to the present house, down the hill, on account of the tsunami. From another place, I don't know where, he doesn't say where he's from.'

[...]

K.O.: 'That was a very cold day, the third of March. It snowed. He remembers it was a very cold day. And then he, strangely, shifts the subject to the, to some Christians. Missionaries who came to Ishinomaki after the tsunami. I don't know why. Many people came to Ishinomaki, including Jesus Christ, he says. I think he means Christians. They brought many things for support, food and supplies.'

[...]

K.O.: 'He says that the worst people here in Japan are the politicians. I don't know why he suddenly changes the subject.'

[laughter]

K.O.: 'Well, he says that because of poor politicians, Ishinomaki hasn't recovered fast. Was he old?'

M.D.C.: 'Yes, 75 or 80 I guess.'

\* [On Hiyoriyama hill] [II U16]

'Hiyori means sunny and yama means hill. Because in old days people just looked out over the sea on a sunny day and the fishermen estimated whether they would have a great catch – depending on the weather. So there are many hiyori-yamas across Japan.

[...]

A lot of people came here for refuge.

[...]

The tsunami rushed to that part of town [pointing to the reinforced hillside and the opposite riverbank] and then rushed back and hit the whole centre part of the city of Ishinomaki [IV Y17]. Not so many buildings collapsed because of the earthquake, but rather because the boats and other debris – mostly big fishing boats – slammed into the buildings. The buildings went away with the boats.

[...]

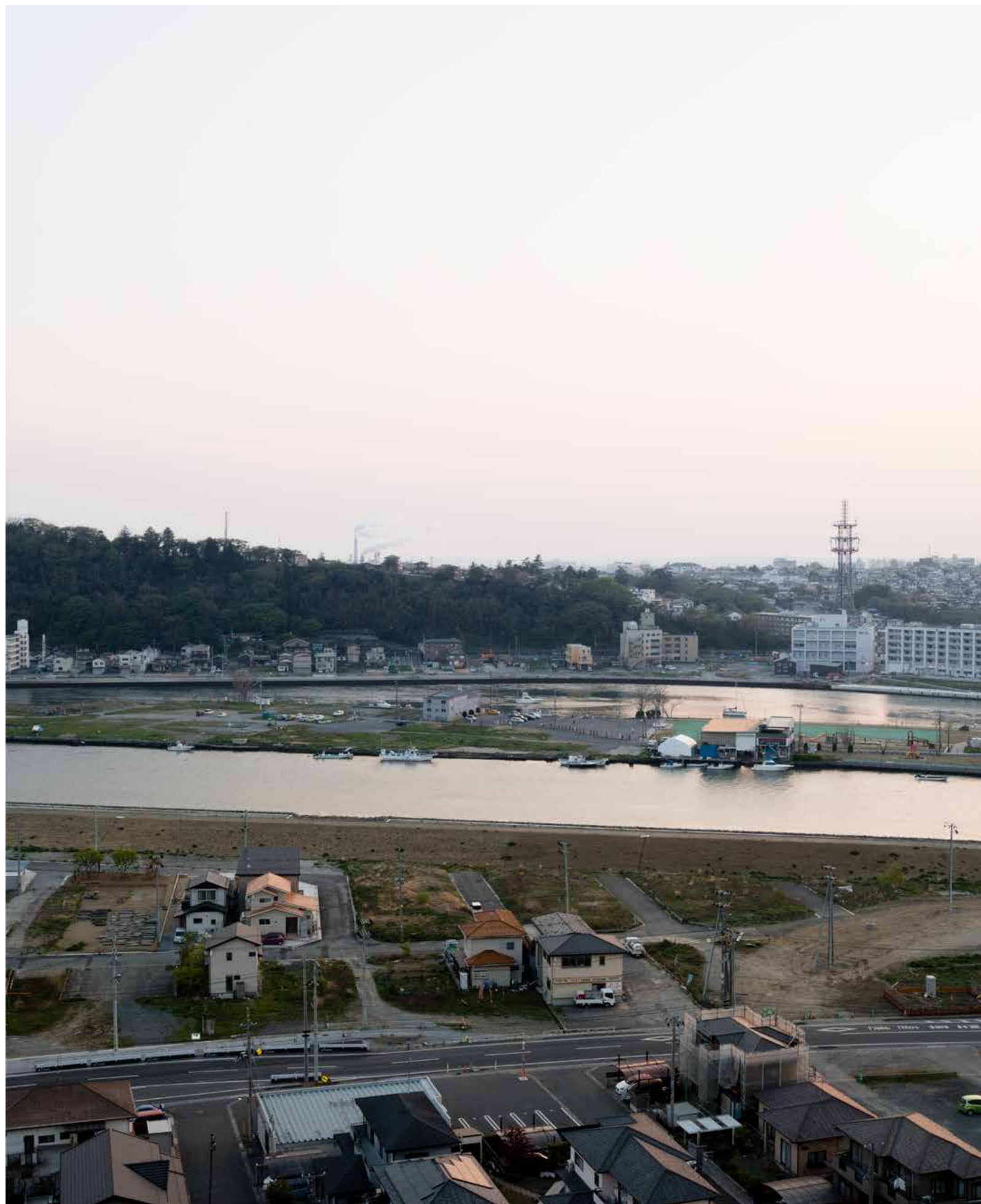
We have to go now or we'll get caught in a downpour.'

[car door slams shut]  
[engine starts]  
[reverse signal sounds]  
[window wipers move quickly]  
[heavy breathing]

## ISHINOMAKI, A PANORAMIC VIEW

T.495.PVI

see next page



## ISHINOMAKI, A PANORAMIC VIEW [III]

T.495.PVI

see next page



## ISHINOMAKI, A PANORAMIC VIEW

T.495.PVI

see next page



## ISHINOMAKI, A PANORAMIC VIEW [IV]

T.495.PVI

see next page

'Following the disaster, there is a lot of new infrastructure in Ishinomaki, like the river dykes, the sea wall, the memorial park. It's a real big change. I never imagined... Most of it is good, but I don't agree with the river dyke at all. Like this part [points at IV B-P23, A-Q24]

It's just ugly and the concrete is not... it's not trustworthy. Concrete cannot keep its strength forever. I think the concrete will be okay for the next sixty years, after that... maintenance... paying huge amounts of money. And even worse: the people who live near the river feel safe because of the dyke.

Some old ladies told me, that once the river dyke is ready, they will be safe.

They are mistaken. The dykes are there for them to have enough time to make a run for the mountains. But they feel safe enough to stay in their houses. The dyke gives a false sense of security. It's a terrible thing.

I often go to the construction site where they are creating the memorial park and it is huge [II E-Q17, G-P18]. The size of the park is the same as Disneyland, Tokyo Disneyland.'

[suddenly switches from English to Japanese and addresses K.O., the interpreter]

K.O.: 'Well, ehm, she is anxious about, ehm, well, to fill the ground of the memorial park, many hills have their soil scratched down. To be used as... well, to fill in the ground. So, she says, we are causing a kind of manmade natural disaster. She doesn't... she is anxious about that. The hills are being scratched down.'

[...]

'Whenever I go near the mountain, the mountain has changed its appearance,' she adds.

[...]

- 'Could I make a quick photograph?'
- 'Yes.'
- 'Could you lean forward? Yes, this can stay. Maybe put your hand on the table? Just one. You can just look in that direction.'

[she laughs between the photographs]

- 'Could you now look at the camera?'
- 'Yes.'
- 'Now outside again.'

- 'From the old days, this town has been attacked by natural disaster, including earthquakes, tsunamis and floods. But the town was rebuilt. Every time, it recovers from these natural disasters.'

- 'We are used to it. But I fear that something like Fukushima, such a fatal disaster is different. Such a disaster is everlasting. If that happens here in Ishinomaki, it's quite another story.'

- 'Earlier we were talking about the high wall that protects us from the sea and the way it installs fear in people because the danger is invisible. Strangely enough we don't have the same with the invisibility of radiation. It's maybe too... how should I put it... too abstract.'

- 'I am not a specialist of radiation... but ehm we are a little far from... well our sea is not so close to... according to the calculation of the government, it is not our sea.'

- 'As you have observed, our city has suffered greatly, about three thousand people died. Our perception is that if Fukushima happened, just Fukushima happened, we would have been very anxious about the radiation and all those things. But here, our main concern was the tsunami and the aftermath, the immediate and the visible. We didn't pay much attention to the radiation. I wasn't nervous about it then and we are not anxious about it now. It is a strange story.'

- 'I have the impression that people abroad are more anxious about the radiation than we are. But why? We don't know the answer.'

[...]

- 'There is storm coming. They call it May-storms. Rain, wind, sometimes tornadoes. Last year some areas suffered greatly.'

- 'The tornadoes come in from the Pacific?'

- 'No one can tell. Where they come from, where they go... they appear suddenly, somewhere, out of nowhere.'

## ISHINOMAKI, A PANORAMIC VIEW

T.495.PVI

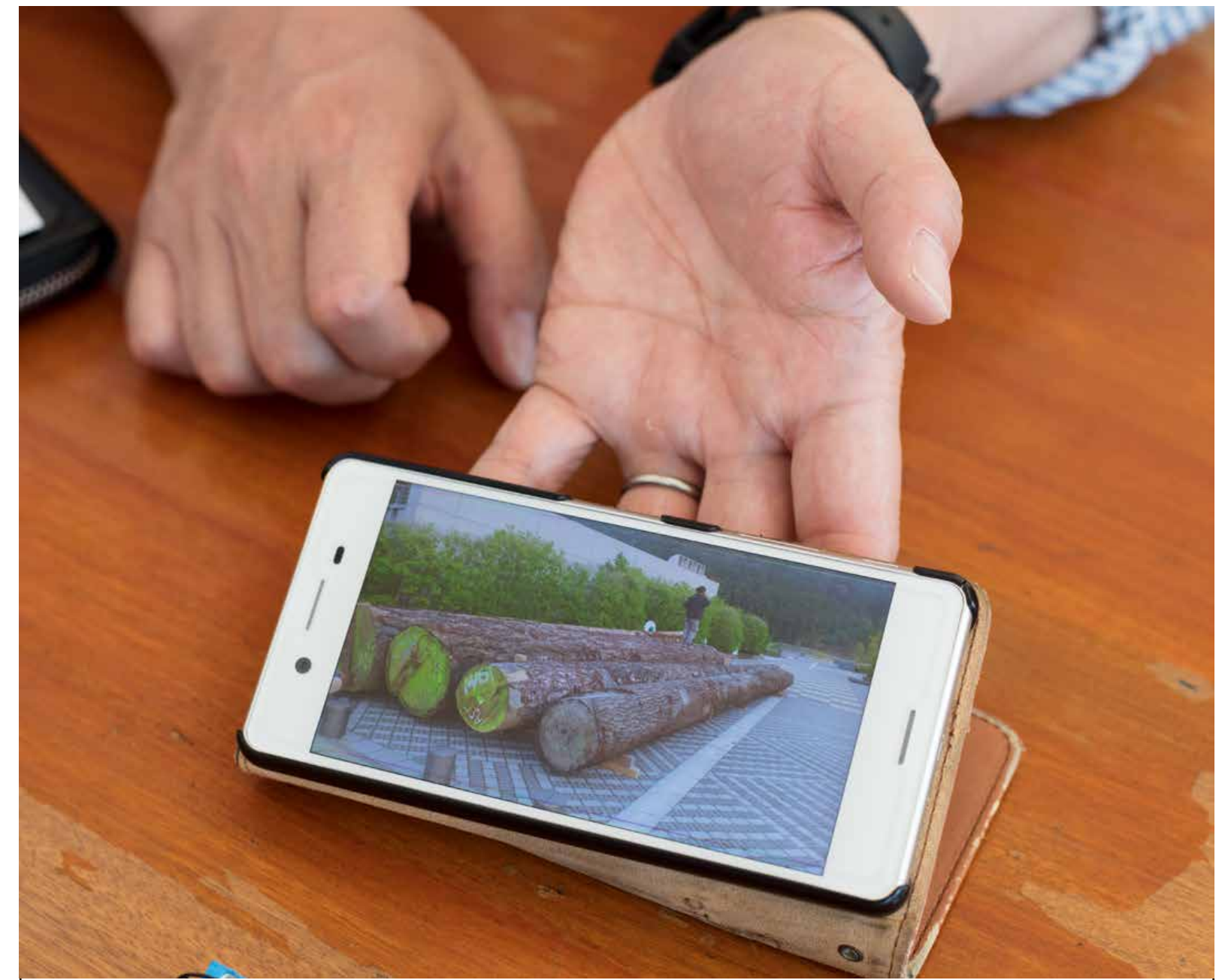
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## ISHINOMAKI, A PANORAMIC VIEW [V]

T.495.PVI

see next page



K.O.: 'I just told him about your documentary on the Sant Juan Bautista. Could you tell him about the purpose of your visit to Ishinomaki?'

M.D.C.: 'Sure. I am making a documentary that somewhere along the way picked up a story on four Canadian trees that were delivered to Ishinomaki for the restoration of the Sant Juan Bautista. I am allowing the documentary to side-track and to expand in directions that are not set from the beginning. Therefore, I asked Mr. Ohtsu, who was so kind to be my interpreter, to put me in touch with some people he thought were interesting to talk to about the town of Ishinomaki.'

[During K.O.'s translation, the man takes out his cell phone and starts swiping. After a few minutes he looks up from his cell phone and turns the device towards M.D.C. The cell phone in his hand displays a picture of six logs. They are neatly lined up on a few beams of wood. A woman with a blue shirt, a clipboard under her left arm and a cell phone at her right ear is walking on top of the logs.]

K.O.: 'I took this picture, he says, in 2012 at the Sant Juan Bautista museum.'

## ISHINOMAKI, A PANORAMIC VIEW

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## ISHINOMAKI, A PANORAMIC VIEW [VI]

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'I was at the hospital, five kilometres from here. I was speaking with the doctor and felt the earthquake. And instantly, I realized it was the biggest and strongest earthquake in my seventy year long life. I decided to come back here as quickly as I could. The doctor stopped me. "The medicine is prepared," he said. I left, jumped in my car and fortunately there were no traffic jams yet. The hospital is around here [II E-Q17, G-P18], in the area that is now completely destroyed. I was [laughs] the last patient. I arrived here within five minutes; I went inside, brought the cash register upstairs and tried to fix the door.

[...]

My car was washed away.\* I found it later. I remember the sound of the alarms of the cars. The earthquake, the water, the short-circuits. The cars made a lot of sounds. To me it appeared as if they were calling for me. "Help me, help me," they said, with their alarms. Until the batteries ran out.

[...]

Afterwards it was very quiet. No cars, no sound. Very, very quiet.'

[...]

'I only saw it from the other side, but all of this was flooded.' [slowly drags her index-, middle- and ring-finger over the computer screen, touching:

I P17, Q17, R17, S17, T17, U17, V17, W17, X17, Y17, Z17, Q18, R18, S18, T18, U18, V18, W18, X18, Y18, Z18, R19, S19, T19, U19, V19, W19, X19, Y19, Z19, Q20, R20, S20, T20, U20, V20, W20, X20, Y20, Z20, Q21, R21, S21, T21, U21, V21, W21, X21, Y21, Z21, S22, T22, U22, V22, W22, X22, Y22, Z22, S23, T23, U23, V23, W23, X23, Y23, Z23, U24, V24, W24, X24, Y24, Z24, W25, X25, Y25, Z25, Y26, Z26, Y27, Z27

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\* Professor Yamamoto is a professor at the University where I used to work. His major speciality is car mechanics. He once worked for Toyota Motor Corp. On his way home from Ishinomaki to Sendai he almost drowned, while his car was literally drowned. He made a narrow escape. And after that, well, I'm very happy to say that he did some research, he did very comprehensive research on how the ship... how the cars could float when a tsunami attacks. He invented a kind of emergency kit. The car in a way becomes a ship.'

## ISHINOMAKI, A PANORAMIC VIEW

T.495.PVI

SEE ALSO: A.132. ASD Ships bunked in anchorage area in Aspropyrgos (p. 6-9), A.132. ASF Fishermen in Aspropyrgos (p. 10), J.957. SJR. The restored mass of the Sant Juan Bautista [replica] (p. 34), J.958. TFL TEL 44 (the restored mass of the Sant Juan Bautista) (p. 35-40), J.960. NAK. Transcript of an interview with Ms. Nakazawa (p. 41-45), J.962. CKB Inside the crumbling keel of the Sant Juan Bautista (p. 46), J.973. BOR. The original masts of the Sant Juan Bautista replica (p. 47), J.973. LPL L. Lumber in the parking lot of the Sant Juan Bautista. Museum (p. 48), L.769. PAC Port Alberni conversation (p. 53-57), M.195. SDY. Nuclear submarines queuing in Devonport Yard (p. 58-61), M.251. TES. Temporary storage of slightly radioactive material (p. 70), M.253. TER. Terend (p. 71), P.733. FI. P. Plutonium 238 pacemaker, the plutonium might escape (p. 75), P.733. PGP. Plutonium 238 pacemaker, as radioactive waste (p. 83-89), R.957. NAD. A lost nuclear-powered listening device on Nianda Devi (p. 90-93), S.715. ISM. Isla Melones, a growing island (p. 96-107), T.472. FSW. Fisherman on Ishinomaki's sea wall (p. 109), T.613. RH. Reinforced hillside in Ishinomaki (p. 122-123), T.615. UOF. Reinforcements along Mount Fuji's Osawa failure (p. 125-127), W.568. BSR. Cem. transcript of a conversation on the BSRK camera (p. 147-148)



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## REINFORCED HILLSIDES IN ISHINOMAKI

T.613.RHI

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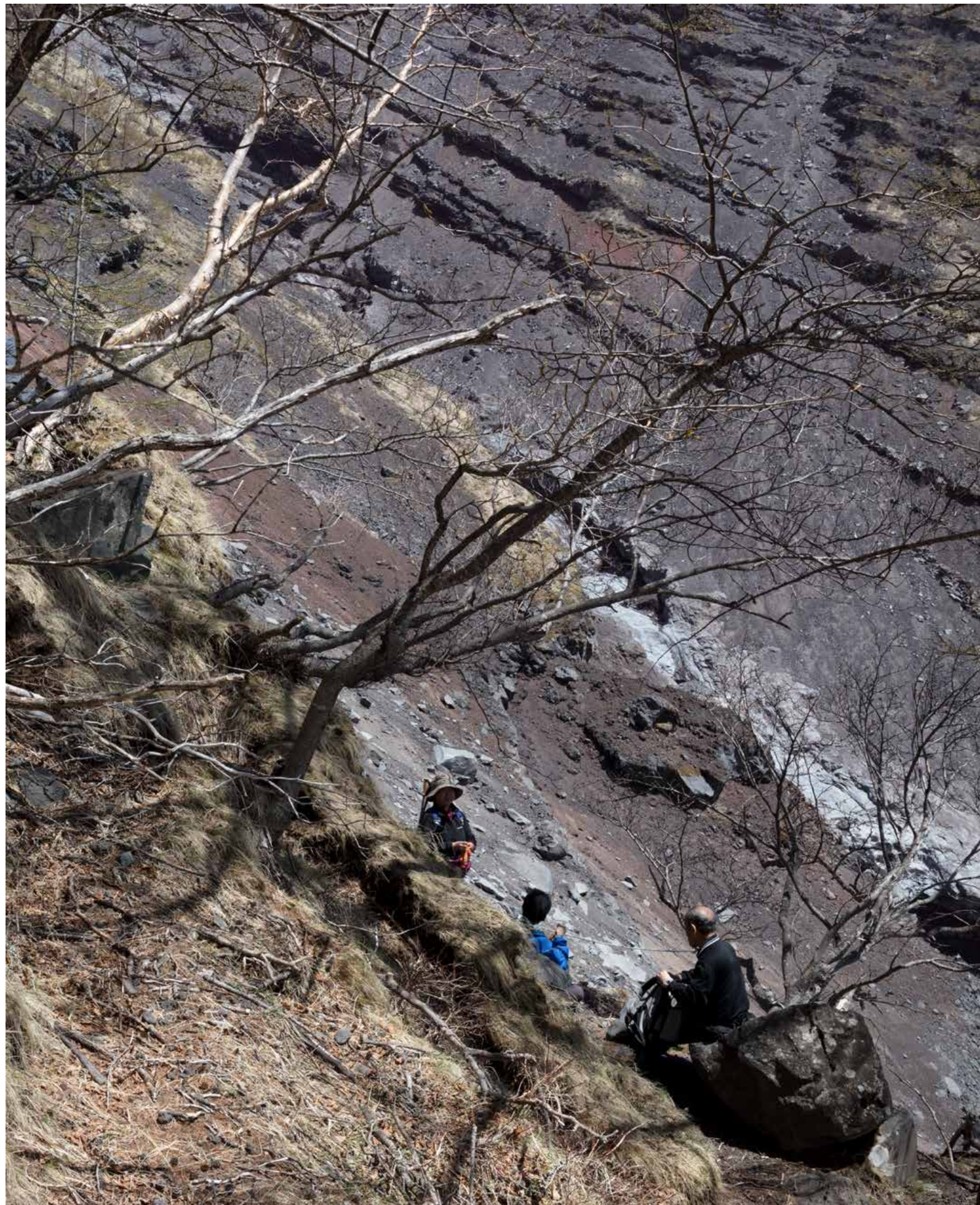
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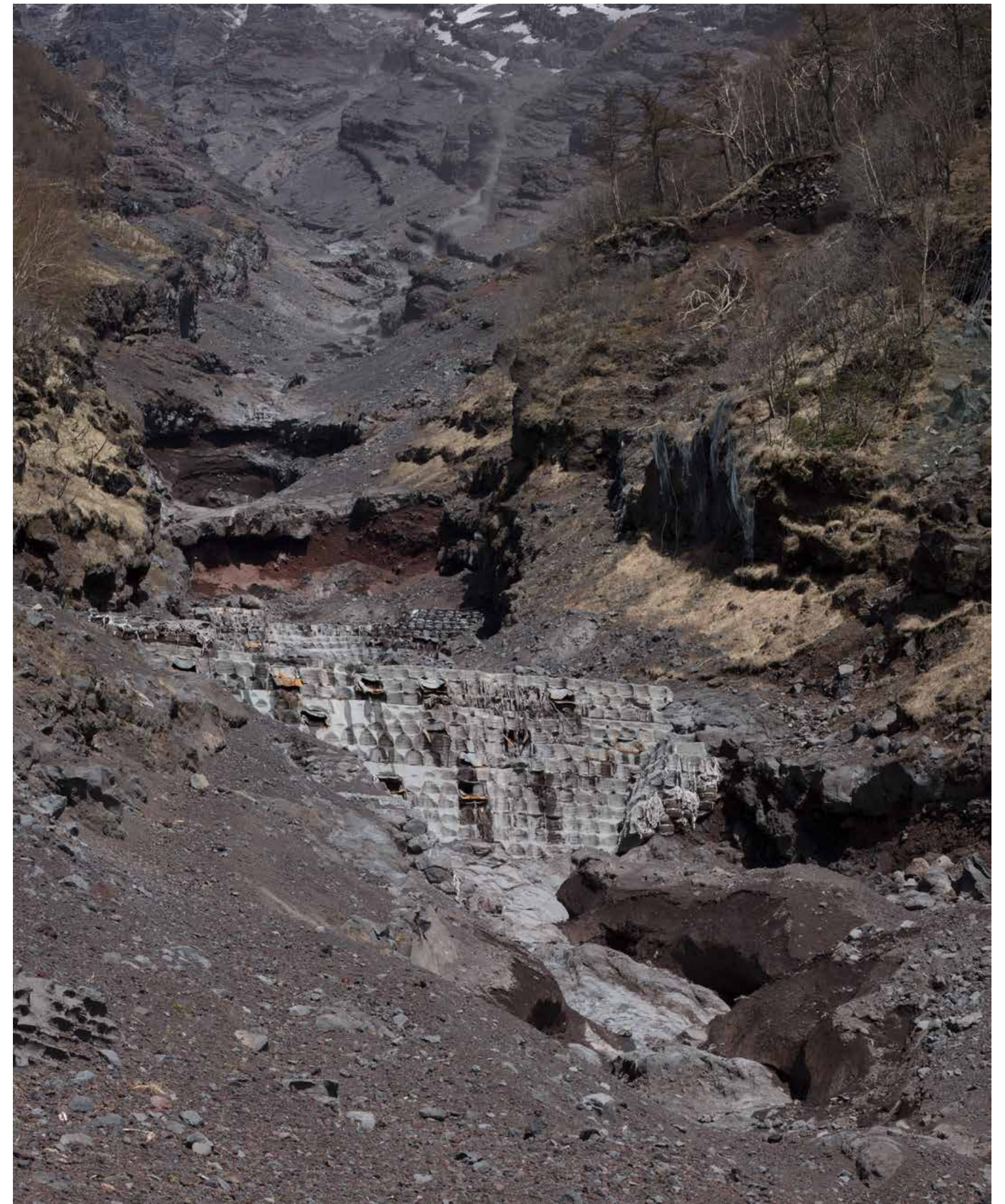
## REINFORCED HILLSIDES IN ISHINOMAKI

T.613.RHI



**THREE PEOPLE LOOKING OUT  
OVER CRUMBLING MOUNT FUJI  
AT THE OSAWA FAILURE**

T.613.TPO



**REINFORCEMENTS ALONG  
MOUNT FUJI'S OSAWA FAILURE**

T.613.UOF

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Dear Sir or Madam,

I am a documentary photographer and I would like to make a documentary about the reinforcement structures on Mount Fuji. I am hoping you could help me. In his 'Court traité du paysage' Alain Roger (Gallimard, 1997) talks about the reinforcements that were built in the eighties to try and halt the effects of erosion on the iconic conical shape of Mount Fuji. He says that in an attempt to ensure the mountain would conform to its image, concrete structures were built. A 1984 New York Times-article speaks of a 'cement band aid' to slow down the erosion in the Osawa failure at a height of 7200 feet.\* I have been reading the Mt. Fuji Sabo Office-website but I was wondering whether you know of these constructions this high up

the mountain that were built in 1982 and whether there are other new constructions at these heights? My main interest is not in the sediment systems at the foot of the mountain but in the constructions higher up on the mountain in the actual Osawa failure that try to keep the mountain together. Do you have any information on these structures?

Thank you very much,  
Kind regards,

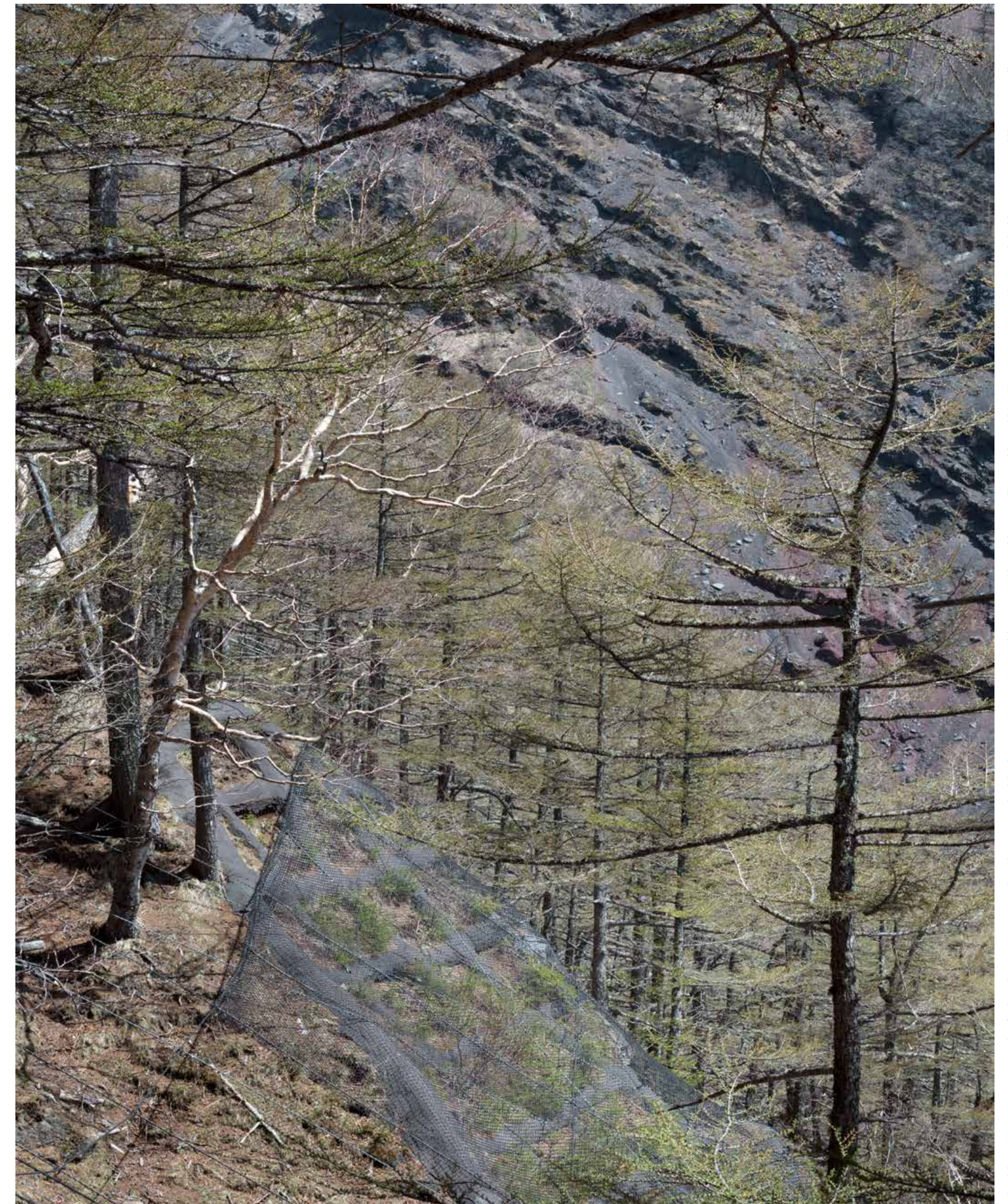
Michiel De Cleene.

\* 'Mt. Fuji: sacred, scenic and now crumbling', The New York Times, viewed 09.04.2018, <<https://www.nytimes.com/1984/09/18/world/mt-fuji-sacred-scenic-and-now-crumbling.html>> (this article by Clyde Haberman appeared in print on 18.09.1984, on page A00001 of the national edition of The New York Times)

## REINFORCEMENTS ALONG MOUNT FUJI'S OSAWA FAILURE

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## REINFORCEMENTS ALONG MOUNT FUJI'S OSAWA FAILURE

T.613.UOF





<p>[in a car] [constant hum of the engine and road in the background, music playing, FM radio]</p> <p>- 'That went well.' - 'What's that?'</p> <p>[driver turns down the radio's volume]</p> <p>- 'That went well.' - 'Yep, more or less like I expected.' - 'The staircase was the toughest part.' - [laughs] 'It was. Good thing you brought a rope.' - 'I didn't.' - 'Whose was it then?'</p> <p>[traffic report on the radio, driver turns the volume up again]</p> <p>- 'I'm surprised there's this much traffic at this time of night.' - 'Probably all taking a head start for the weekend.'</p>	<p>[traffic report ends, music playing]</p> <p>- [taps along on the steering wheel] 'Good highway song.' - 'I always wonder what they grow in those orange illuminated greenhouses.' [points at orange illuminated greenhouse, [N15]] - 'Don't know.' - 'Orchids?' - 'Who needs that many orchids?' - 'Your mom.'</p> <p>[laughter]</p> <p>- 'It's sodium light, low pressure sodium, the same kind of bulbs they use to light this highway.' - 'Why is that? Efficiency?'</p> <p>[driver turns down the radio's volume]</p> <p>- 'They use it to light roads because the wavelength these bulbs emit is exactly the wavelength the human eye is most sensitive for. So less energy is needed to make us see more.'</p>
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## CONVERSATION ALONG A SODIUM LIT HIGHWAY [TRANSCRIPT]

U.178.CSH

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<p>- [nods]</p> <p>- 'Someone once told me that it increases the concentration of drivers. Because you see everything monochromatically, except for what appears within the beam of your headlights. These lamps only emit orange light and therefore inhibit wide spectrum colour vision at night. That's why you can't distinguish a green car from a red one. They only reflect orange light, therefore, both appear as shades of orange.'</p> <p>- 'We're driving around in a black and white movie with a heavy sepia-filter.'</p> <p>- 'Yes.'</p> <p>- 'Boring movie.'</p> <p>- 'It gets better. Recent research has shown that these lights' wavelength reacts with a certain photoreceptor in plants and trees. I can't recall what the name was.'</p> <p>- 'Something like chlorophyll?'</p> <p>- 'It's a similar thing but it's not that...'</p> <p>- 'What does it do?'</p> <p>- 'If the receptor registers this very particular reddish, orangey light, it signals the tree that it's daytime, if the sun goes down this wavelength disappears and the tree knows it's night.'</p> <p>- 'Okay.'</p> <p>- 'But this wavelength is exactly the same as the one these low pressure sodium lights emit.'</p> <p>- 'The sun goes down, the lights come on, the lights are turned off, the sun rises.'</p> <p>- 'Indeed. So trees growing near these streetlights never sleep.'</p> <p>- 'A tree that never sleeps is a bad tree?'</p> <p>- 'I'm not sure, but it is said they grow quicker and in the process develop more deficiencies and cancerous growth.'</p> <p>- 'So this orange light we are so fond of for being part of the highway experience is in fact an ecological disaster.'</p> <p>- 'Only for a very small percentage of trees, the ones</p>	<p>near the streetlights.'</p> <p>- [points at the dense edge of birch, elm and oak lining the highway]</p> <p>- 'Yes, this forest edge never sleeps.'</p> <p>- 'Wouldn't it be better to change these lights?'</p> <p>- 'The advent of alternatives is prompting change, but apparently at quite a slow rate. It's funny you'd mention the authentic highway experience, the same is happening in Rome. You heard about this?'</p> <p>- 'No.'</p> <p>- 'The city decided to start changing the low pressure sodium bulbs for LEDs.'</p> <p>- 'Of course.'</p> <p>- 'Anyway, by nightfall these new lights went on and immediately flamed a kind of civil uprising. The nightly Rome was no longer recognizable. The romantic hue of the low pressure sodium had been replaced by what was called the cold white light of a sterile laboratory.'</p> <p>[a woman's voice: in two kilometres, keep right and take exit]</p> <p>- 'PHYTOCHROME!'</p> <p>- 'What?'</p> <p>- 'That's the receptor in the trees I was talking about.'</p> <p>- 'What happened with the Romans?'</p> <p>- 'They started a petition to reverse the decision in order to get the low pressure sodium back in an attempt to restore the authentic nightly Rome. One of their arguments was that they no longer recognized the Colosseum.'</p> <p>- 'The city gave in to their demands?'</p> <p>- 'More or less. They installed LED's that mimic the sodium light's colour.'</p> <p>[a woman's voice: keep right and take exit]</p>
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## CONVERSATION ALONG A SODIUM LIT HIGHWAY [TRANSCRIPT]

U.178.CSH

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Fifty-four experimental grassland ‘mesocosms’ were established in July 2012 at the University of Exeter’s Penryn Campus, UK.

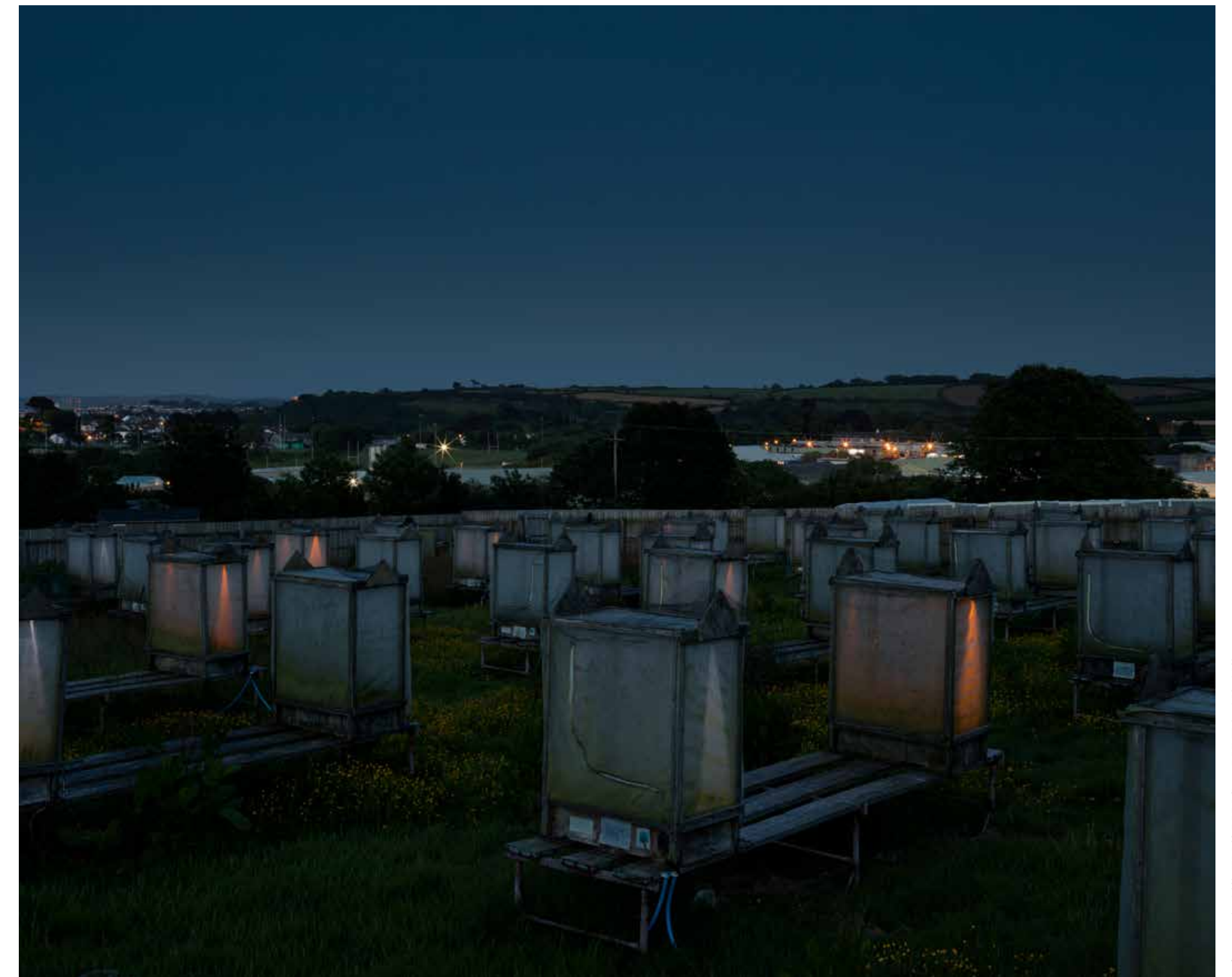
Each mesocosm consists of a 1m x 0.5m x 0.2m trough, lined with woven plastic textile for drainage and filled with coarse builder’s sand, and mounted on wooden planks 0.75 m above the ground. A wooden frame 1m tall and lined with fine mesh, with a zip for access for maintenance and measurements, is mounted on top of the trough to isolate the invertebrate community. Seventy-two individual plants, representing four individuals from each of eighteen common grassland species were planted in a randomized grid pattern. Exhaustive counts of the number of flower heads of each species (classified into three phenological classes) and three minute counts of aphids within each mesocosm are carried out at bi-weekly intervals.

At night, the mesocosms light up. Eighteen turn white and eighteen amber (the other eighteen don’t light up). The ‘white’ treatment consists of ‘cool white’ LEDs, with a spectrum similar to those in commercial LED street lighting systems. The ‘amber’

## PENRYN, ARTIFICIAL NIGHTLIGHT MESOCOSM-EXPERIMENT [DUSK]

U.568.PEN

see next page



treatment consists of a virtually monochromatic LED strip aiming to simulate the peak emittance of monochromatic low-pressure sodium (LPS) lighting, which was formerly in widespread use in the UK and elsewhere, and is still the most common form of lighting in many countries.\*

\* Ecological impacts of artificial nighttime lighting experiment conducted under the Ecolight project led by K.J. Gaston (University of Exeter), and supported by the European Research Council. Excerpts from: BENNIE, J., DAVIES, T.W., CRUSE, D., INGER, R., GASTON, K.J., Cascading effects of artificial light at night: resource-mediated control of herbivores in a grassland ecosystem, in: GASTON, K.J., VISSER, M.E., HÖLKER, F., (eds.), Philosophical Transactions of The Royal Society B: Biological Sciences, Volume 370, Issue 1667, ‘The biological impacts of artificial light at night: from molecules to communities’, 2015, viewed 21/01/2016, <<https://doi.org/10.1098/rstb.2014.0131>>

## PENRYN, ARTIFICIAL NIGHTLIGHT MESOCOSM-EXPERIMENT [NIGHT]

U.568.PEN



## PENRYN, OVERLOOKING THE EXPERIMENT, SIGHTING OF THE FIRE

U.699.PFI



The next morning. The smell was distinct, but the fireground could not be found. A local resident, walking a crossbreed dog, didn't know of a fire. She had been walking all morning and hadn't seen any signs of it. None, whatsoever.

- 'I witnessed the fire from the university campus, overlooking the experiment. I had the impression the fire was close to the left windmill.'  
- 'In these hills everything looks close to the windmills.'

- Found on the hill in search of the fire:
1. a dead buzzard at the base of the windmill
  2. a ship's hull under construction
  3. a composite structure: concrete base, tilted cube

## PENRYN, IN SEARCH OF THE FIREGROUND [BUZZARD]

U.699.PFJ

see next page



## PENRYN, IN SEARCH OF THE FIREGROUND [SHIP'S HULL]

U.699.PFJ

see next page

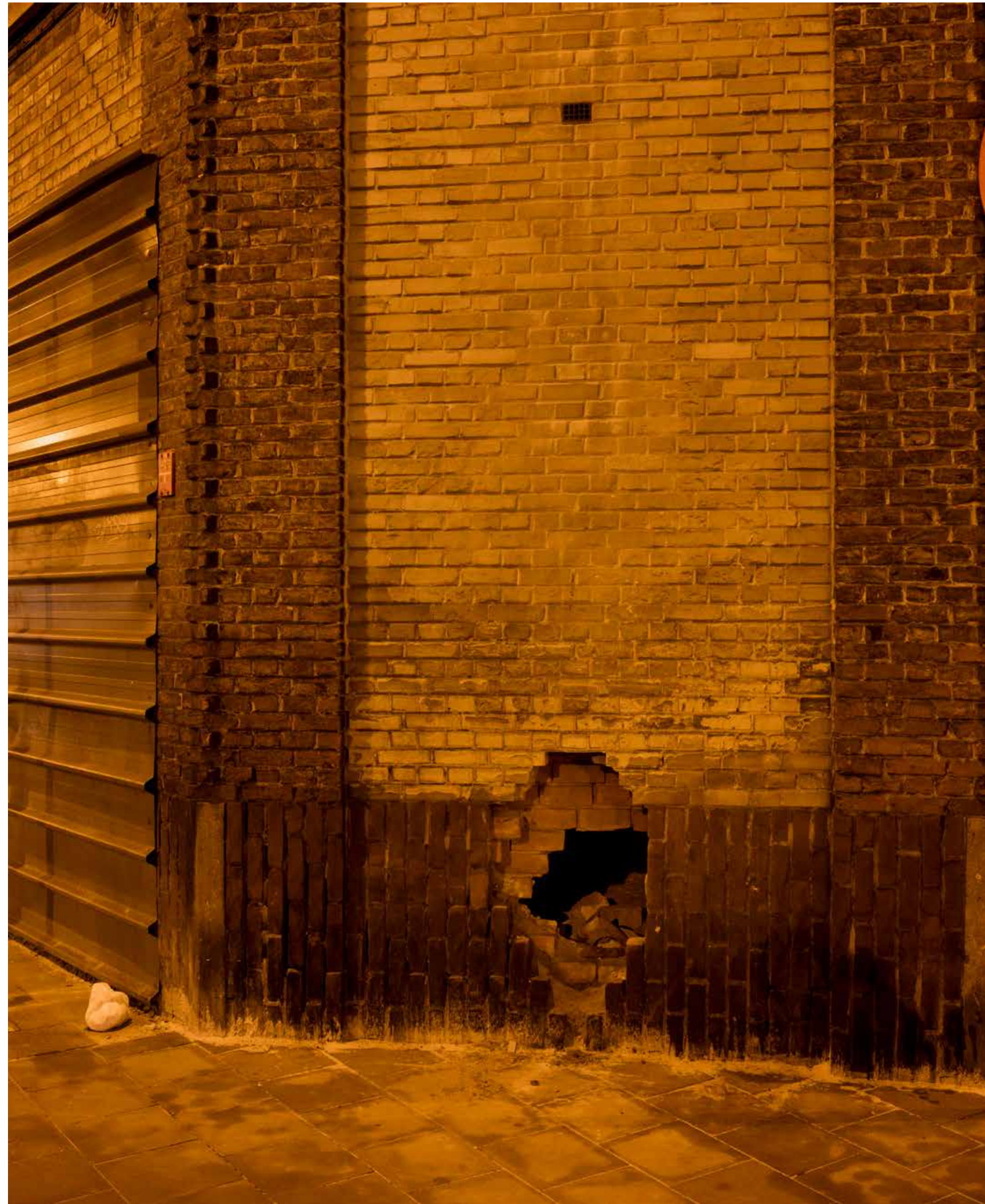


## PENRYN, IN SEARCH OF THE FIREGROUND [COMPOSITE STRUCTURE]

U.699.PFJ

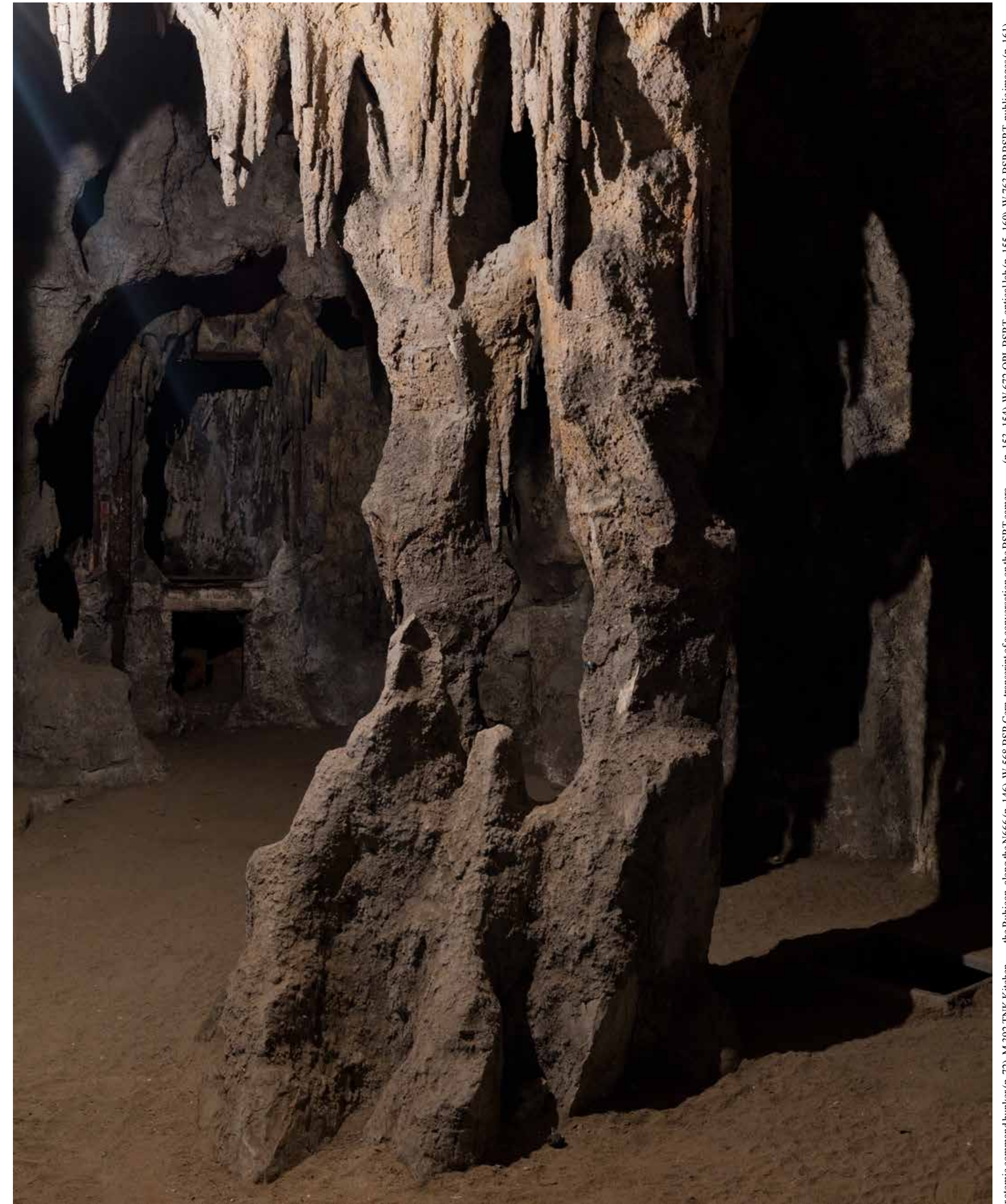


SEE ALSO: A.132.ASD Ships bunked in recharge area in Aspropyrgos (p. 6-9), M.392.DST Dark structure in a former atomic command bunker (p. 72), M.392.TNK Kitchen of a former atomic command bunker (p. 75), R.957.NAD A lost nuclear-powered listening device on Nanda Devi (p. 90-95), U.178.CSH Conversation control cavern (p. 149), W.568.DUN/Cem, DUNE (p. 150-152), W.569.EXC Cem, towards building 282, in search of excavation samples (p. 153-154), W.672.OPL/BSRT, optical lab (p. 155-160), Y.763.BSP/BSRT, public images (p. 161), Y.863.RRS Retrieved rock samples [Cem] (p. 169), Y.863.VAY Cavity (p. 170)



## GROTTO

W.299.BGR



## THE MYSTERIOUS CAVE

W.392.CMC

SEE ALSO: M.392.DST Dark structure in a former atomic command bunker (p. 72), M.392.TNK Kitchen of a former atomic command bunker (p. 75), R.957.NAD A lost nuclear-powered listening device on Nanda Devi (p. 90-93), W.299.BGR Grotto (p. 144), W.552.RUB Paleolithic caves hollowed out by a conversation control cavern (p. 147-148), W.568.CMS Cem, scale model on display in the CMS control cavern (p. 149), W.568.DUN Cem, DUNE (p. 150-152), W.569.EXC Cem, towards building 282, in search of excavation samples (p. 153-154), W.672.OPL/BSRT, optical lab (p. 155-160), W.763.BSP/BSRT, public images (p. 161), Y.815.FLT/Flint (p. 168), Y.863.RRS Retrieved rock samples [Cem] (p. 169), Y.863.VAY Cavity (p. 170)



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The so-called Mysterious Cave in Citadelpark, Gent, Belgium, was conceptualized by rocailleur F. Dumilieu. Rocks, stalactites and stalacmites were mimicked by pouring cement over the remains of a former ammunition depot. The brickwork alcoves [F13] testify to the time when this cave was filled with aquariums.

When an employee of the city unlocked and opened the gate, a man rushed out of the dark Mysterious Cave, shielding his eyes from the intense light outside. He left behind a spoon, a blanket, a half empty bottle of water and a plastic bag containing four biscuits, a pen, another spoon and a hand-drawn map of the subterranean structures in the park. His map situates the cave adjacent to the former atomic command bunker.

## PALEOLITHIC CAVES HOLLOWED OUT BY THE RUBICON, ALONG THE N666

W.552.RUB



[25.01.2018]

[a small office at Cern's Préveessin site, building 865] [with Federico R., Georges T. and M.D.C.]

F.R.: 'Hi, I'm Federico.'

M.D.C.: 'Michiel.'

G.T.: 'Georges. Nice to meet you. We can have the discussion over coffee, right?'

F.R.: 'It isn't open yet, we can already start, or without coffee you can't?'

G.T.: 'Sure, sure, ask us all the questions you want.'

M.D.C.: 'My main interest is in the BSRT camera. Before coming to CERN I read some articles about it and came across some of the images it records.'

F.R.: 'They are on YouTube also'

[laughter]

M.D.C.: 'Does this department focus solely on this device?'

G.T.: 'So, the department you are in now is "BEAM", then there's a group "BEAM INSTRUMENTATION" and then there is our section that is concerned with measuring the beam profile. So the BSRT is a device that is within the

section of profile measurements within the department of beams. We have many devices, the beam synchrotron radiation telescope, or BSRT, is only one.'

F.R.: 'We are in charge of providing all beam diagnostics: speed, position, beam losses, beam intensity, beam transverse size... For this purpose we use several devices, ranging from an interceptive screen, to wires that fly through the beam. However, the most fancy is the BSRT. It does not intercept, it is an imaging device in the sense that this radiation it records is not the proton beam itself, but an image it projects.'

M.D.C.: 'How does the beam project an image?'

F.R.: 'Every time a charged particle is undergoing acceleration it emits something. Even when the energy or the speed of the particles is constant, when you bend its trajectory, this is by definition an acceleration because it is a variation of the velocity vector. In this case, the proton beam emits light. And this light is emitted tangentially at the location of the bending. So from thereon the particles go along their curved trajectory and the light travels in a straight line. So they separate. In the LHC [Large Hadron Collider] we sit about thirty metres behind the dipole, where this

## CERN, TRANSCRIPT OF A CONVERSATION ON THE BSRT CAMERA

W.568.BSR

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bending is taking place. So there we insert a mirror that is not intercepting the particle beam, but it is intercepting this light. The mirror is tilted in such a way that it directs the light through a viewport out of the vacuum pipe and onto a very complex optical system that directs, focuses and records the image.'

**M.D.C.:** Is it the dipole or the actual beam that emits the light?'

**G.T.:** 'It is the beam itself.'

**F.R.:** 'It is the beam that is passing through the dipole that emits.'

**G.T.:** 'So the beam, when it is curving, it loses a little bit of energy. This energy that is lost is being emitted in the form of light. So that's photons. Intrinsicly, whenever you have a proton beam and you let it circulate, in every point that it is curving, left and right, it is emitting light. Intrinsicly. So in one point of the LHC we are extracting this light. But in all the other 27 kilometres, this light is emitted whenever the beam is curving. But then it is simply not extracted, it is just reflecting inside the vacuum chamber.'

**F.R.:** 'Inside there is an ensemble of... well you know

the protons, they travel in bunches, in groups... so in an ensemble of charged particles that constitute a bunch, each particle is emitting a certain amount of photons, so basically by imaging this light you can reconstruct how these protons are populated within the bunch. The image of the light is directly related to the distribution of particles within the bunch and this is what we want to measure: how the particles are distributed.'

**G.T.:** 'As Federico said: it is a fancy device. It's fancy because it is one of the only systems where you can see visible light coming from protons because the LHC operates at such high energies. It's the highest energy machine in the world.'

**M.D.C.:** 'You talk about visible light, but let's assume it is possible to be inside the tunnel when it is working and I would look through this viewport, to the mirror, would my eye be able to see anything or nothing at all?'

**G.T.:** 'Absolutely'

**M.D.C.:** 'So it is no extremely weak light?'

**F.R.:** 'No, you could see it.'

**M.D.C.:** 'So am I right to assume that the beam pipe is illuminated for its entire length?'

## CERN, TRANSCRIPT OF A CONVERSATION ON THE BSRT CAMERA

W.568.BSR



## CERN, SCALE MODEL ON DISPLAY IN THE CMS CONTROL CAVERN

W.568.CMS



**G.T.:** 'No no no, you have the electrons, I mean the protons, they are travelling through this steel pipe, which is obscure. The light is not coming through, you can not see it.'

**M.D.C.:** 'No, but if...'

**G.T.:** 'If you put a glass vacuum chamber, you see light everywhere.'

**F.R.:** 'It is a sweep of light. But you can not have a glass vacuum chamber.'

**M.D.C.:** 'So if we think about the inside of the tunnel it is illuminated.'

**G.T.:** 'The beam pipe, not the tunnel in its entirety but the vacuum chamber within it.'

**M.D.C.:** 'Right, so the inside of the beam pipe is illuminated. But we can only think it, we can never see it.'

**G.T.:** 'Yes, definitely, it's lit, it's full of light, but you can not see it. We extract it only at one point. However, everywhere inside it is full of light, because, intrinsically at these energies whenever protons are curving they are emitting light. It's a beautiful image we get.'

**M.D.C.:** 'I read that some years ago the mirror heated and at some point even fell down into the vacuum.'

Could you see the image changing under the influence of the heat?'

**G.T.:** 'The image was distorted'

**F.R.:** 'You are very well documented...'

[laughter]

**F.R.:** '... on the malfunctions.'

[Georges is making a quick sketch]

**G.T.:** 'So this is the trajectory of the protons, this is the LHC. The protons are turning within the LHC. At every point where the beam is curving, there is a dipole, Now let's zoom in on this part right here: this is the dipole, the beam arrives, the protons, they curve a little bit inside the dipole and they go out. The light is emitted inside the dipole, as Federico said, tangentially to the trajectory. This is the circle and the tangent to this circle is the direction of the emission of the light. So the protons are being curved, but our light is not affected by the magnetic field of the dipole, so it goes straight. After some

## CERN, DUNE

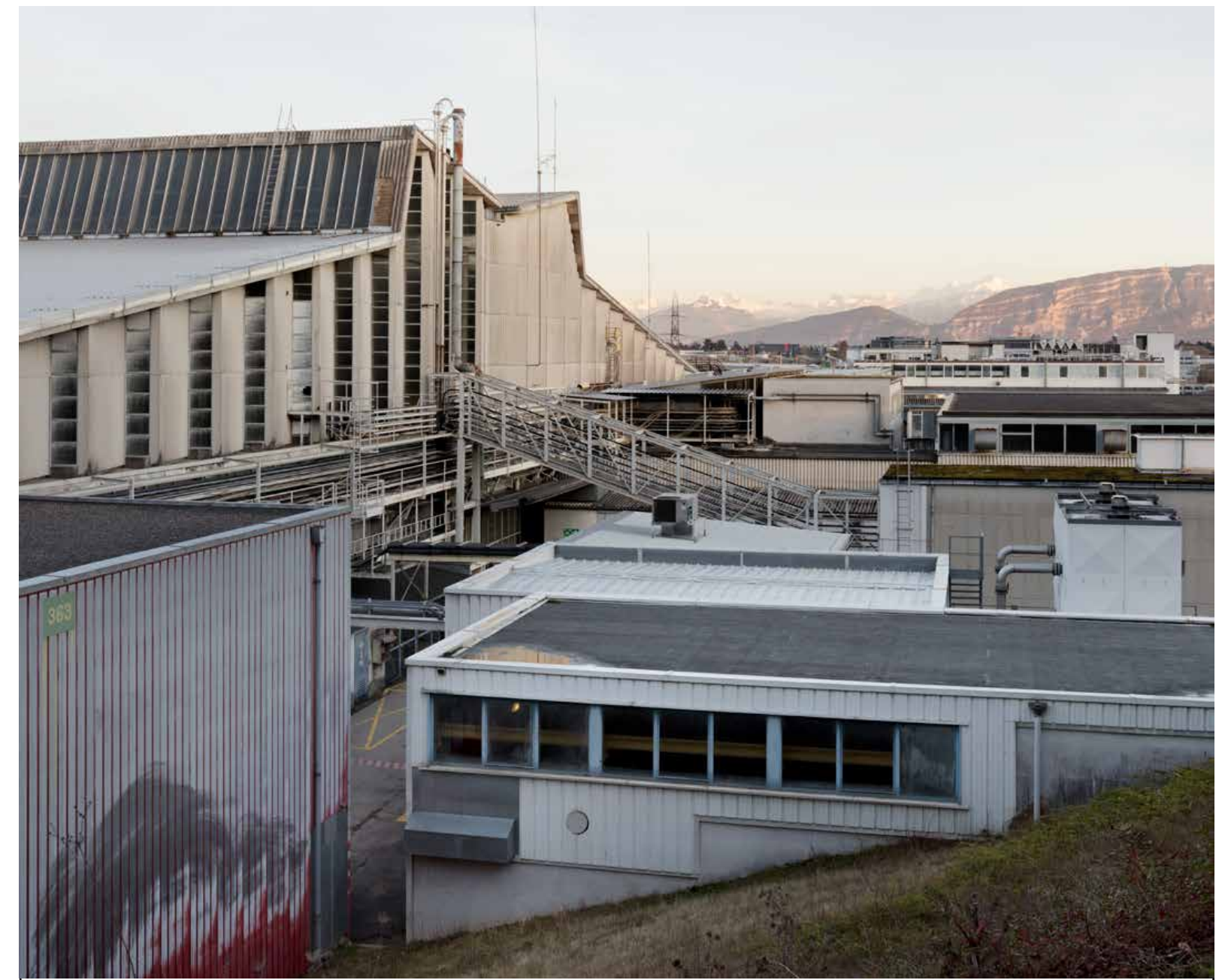


## CERN, DUNE



## CERN, DUNE

W.568.DUN



Dear Mrs. Sanders,

I was at CERN two weeks ago (from 22 until 25 January). Before coming over I took a look at the exhibition objects that are listed on the CERN document server and the rock samples from the 1985 LEP/LHC tunnel

excavation caught my attention (<https://cds.cern.ch/record/2289741?ln=en>). The CERN document server states that these rock samples are stored in building 282.\*

During my stay at CERN I took a walk there and knocked on the door, a man opened the

door. I asked him about the rock samples and gave him the reference number (CERN-Obj-AC-063). We stood among various exhibition objects, most of them in plywood cases or bubble wrap. He told me he knew every object in the building, but he couldn't recall ever having come across

distance – almost 30 metres – the distance between the protons and the light is enough to approach from this side and insert a mirror. This mirror is extracting the photons without interfering with the protons. However, it is still very close to the proton beam, we are talking about ten millimetres. So this [shows a small gap between index finger and thumb], this stands between a very high-energy beam and the mirror. When you said we had problems with the heating of the mirror, the mirror was heating just because it was very close to the beam. If the geometry of the mirror is such that it functions as an antenna, it absorbs all this heat, all these fields that are walking with the beam. So it's essentially like a microwave, it is getting warmer and

warmer and warmer. When we are imaging, we are unaware of what is happening inside the vacuum. But all of a sudden we are observing some strange image.'

**F.R.:** 'The mirror moved and got all blistered and deformed. Which gave us an image that resembled a galaxy, beautiful but useless.'

**G.T.:** 'Instead of having a very clean spot, which represents the beam, we are seeing strange images. And this is just because the mirror is not an ideal reflective mirror but got effected and distorted by the energy of the beam.'

**M.D.C.:** 'You, as scientists, are looking for the answer to the problem from a technical point of view. But you are not the only ones trying to explain the images the

\* See next page [F11]

## CERN, TOWARDS BUILDING 282, IN SEARCH OF EXCAVATION SAMPLES

W.569.EXC

see next page



rock samples, he advised me to send you an email concerning these particular objects. He assumed the document server is no longer up to date and that the rock samples are probably stored elsewhere. He remembered a story his local librarian

once told him: if a book is returned to the wrong shelf, or a reference is one letter off in the catalogue, the book might be lost forever and can only resurface by coincidence.

Do you know what happened to these rock samples?

Thank you very much,  
All the best,  
Michiel De Cleene.

BSRT-camera makes. During operation of the LHC, as you know, outsiders can also look at the control screens and among others things at the BSRT-images. At the beginning of our conversation you already mentioned all the YouTube videos, I'm guessing you were referring to the great number of people who analyse your images and see demons and devils in it.'

interpreting your images. And seeing them as the ultimate proof of their assumption that CERN is trying to open occult dimensions and is in essence the present-day tower of Babel'

G.T.: 'Ohh, well I don't know.'

F.R.: 'We laugh a lot.'

G.T.: 'These people... I mean, I went through a video once that claims that CERN is unleashing the demons and that you can see it in the BSRT. It's like when you go to the shrink and you see that black spot on the white paper, and they ask you: "What do you see?" It reflects what you are thinking, and what you would like to see in that thing... Those images, especially the ones we make at the lower energies, emit very little light, so when you see these pixels going white and black like this, it is really because we are looking at single

[laughter]

G.T.: 'I have seen those videos!'

[laughter]

M.D.C.: 'I am wondering how you as designers of the machinery, of the technology think about people

# CERN, TOWARDS BUILDING 282, IN SEARCH OF EXCAVATION SAMPLES

W.569.EXC



# BSRT, OPTICAL LAB

W.672.OPL

see next page



## BSRT, OPTICAL LAB

W.672.OPL

see next page

photons. The level of the light is very low. We are taking images in very difficult conditions, there is not enough light, that's why there is this much noise in the image and people can stare at it and imagine whatever they want.'

M.D.C.: 'When I look at these videos with the red circles around what they are convinced are demons, all I could see was what I recognize as compression-artefacts. When you save a jpeg a hundred times upon itself, all you're left with is a bunch of jpeg artefacts. These demons look a bit like that.'

G.T.: 'Yes, I know what you mean. If you want to go technical: the stream is analogue, it goes out from the tunnel with an analogue cable, it goes to an electronic device that is one hundred metres further. That device is equipped with a frame grabber. So now you are resampling the video with still frames, and then you are encoding it with the MPEG H264, you are encoding it into a video format built from the still images at 50 Hz. That signal, in turn, is going to the screens in the control room, streamed over a broadcast ip-address – yet another encoding technology. Those TV's work at 30Hz, I think. And that TV is captured in turn as a source for the video on the website, for the livestream. The website is kept very far from the collider. I mean, everything in the tunnel is completely separated from the outside. It's for the safety of the machine itself, in order for it not to be hacked and everything. The number of layers of protection from the source of the signal to the end point that you can deliver to the internet that everybody can see, is huge. You have different phases of encoding, sampling, rebuilding of videos from still frames... and so on. You can get whatever artefacts you are seeing, not just like saving a jpeg one hundred times, it is way more complicated. So the devil is not in the beam, it is in the compression.'

[laughter]

G.T.: 'Definitely.'

F.R.: 'Back in the time when we didn't understand thunder, people also thought it was a higher being, something transcendental that was angry with us. I think it's a way of trying to cope with what they don't understand by mythologizing it. And here at CERN there is a lot a layman doesn't grasp.'

G.T.: 'Coffee!'

[In the queue for coffee]

G.T.: 'So, did you go underground?'

M.D.C.: 'Yes, I saw CMS.'

G.T.: 'Was it open?'

M.D.C.: 'Yes it was.'

G.T.: 'You had a nice view? Good pictures?'

M.D.C.: 'Yes, I made a picture of the adjacent computer control cavern with a replica of the underground structure displayed on a table and some people working in the background.'

F.R.: 'So no photograph of the detector?'

M.D.C.: 'No, there is not much I could add.'

F.R.: 'Of course.'

M.D.C.: 'I did photograph the DUNE experiment.'

G.T.: 'Dune?'

M.D.C.: 'Yes, dune.'

G.T.: 'Dune, never been to dune.'

F.R.: 'Dune is neutrinos, no? Is there already a facility at CERN? Or is it still only conceptual?'

M.D.C.: 'Yes, here at Prévessin, they are building two scale models of a detector that will be buried a mile

below ground in a former gold mine in South Dakota. We were allowed inside. They told me each cube is like a chilled thermos that will be filled with liquid argon. It looked like the inside of a golden chocolate wrapping.'

[conversations in Italian, French and English and the emptying of coffee filters in the background]

[G.T., F.R. and M.D.C. sitting at a small table next to the door in the cafeteria]

[Georges comes over holding a device, two espressos and a renversé]

M.D.C.: 'This is the camera?'

G.T.: 'Yes, part of it.'

M.D.C.: 'This is a laboratory replica?'

G.T.: 'No it's the actual camera, it has been down in the tunnel visualizing the beam, but now we are using another one.'

[over coffee G.T., F.R. and M.D.C. talk about photo intensifiers, interdetectorial love at CERN and radioactivity]

F.R.: 'Georges, do you have anything mounted in the optical lab?'

G.T.: 'No, not much. The LHC is in technical shutdown, so we are in the tunnel, doing interventions and installing and mounting things, so we are not focused on work in the lab. What was developed in the lab is now being installed in the machine.'

M.D.C.: 'Do you install all the devices yourself in the tunnel?'

G.T.: 'Absolutely, that's the fun part, you can not do the shitty part of simulations and give that part to somebody else. It is very delicate work, it requires very high ability and skill and a lot of training in labs. It's not like you can outsource it.'

M.D.C.: 'Could I see the optical lab?'

G.T.: 'The empty optical lab, sure. But there is more machinery in my office than in the lab.'

[G.T. and M.D.C. walk towards the optical lab, same floor, different hallway]

[G.T. and M.D.C. walk past the coffee lady, the red staircase and through the software department]

[in the optical lab]

[G.T. greets a man with a chequered shirt working in the optical lab]

G.T.: 'Ola José, cómo estás?'

J.: 'Very good, very good, very good.'

G.T.: 'That [points at the optical table] was once the replica of the BSRT camera, but as I already said we just moved everything belowground during this technical shutdown. So I can only show you a very poor optical lab.'

M.D.C.: 'Could I take a photograph of what remains of the replica?'

G.T.: 'Of course.'

[humming in the background, sound of tripod legs sliding open, lens cap falling]

G.T.: 'Whoever will see this picture, will say "Oh these poor guys, they have a very sad lab."'

[the sound of a chair being moved and a drawer being opened and closed again]

## BSRT, OPTICAL LAB

W.672.OPL

see next page

G.T.: 'José!'

[the sound of footsteps sounding more and more remote]  
[unintelligible dialogue in the background]  
[sound of tripod legs being loosened, shortened and tightened again]

[long pause, constant hum in the background]  
[sound of camera shutter, long exposure]  
[sound of camera shutter, slightly longer exposure]

G.T.: 'Michiel!'

M.D.C.: 'Yes?'

G.T.: 'Maybe you can also make a picture of this set-up of José's. Something meaningful at least. You could take a picture before he closes this light tight closet.'

[practically unintelligible]  
[only snippets of the conversations come through]

G.T.: 'charged particles... the lab... the light coming from the beam... to check that the system is working...'

[walk back to Georges' office where the part of the BSRT camera that Georges showed over coffee is sitting on the corner of his desk]  
[Georges isn't there, a colleague of his is]

M.D.C.: 'Hi.'

C.: 'Hi'

M.D.C.: 'Do you also work on the BSRT system?'

C.: 'No, not on the BSRT but on another device on the same optical table. I work on the coronagraph, a device that aims to look at the protons that don't behave well and drift away from the centre of the beam. We look at these protons by mimicking the way the moon obscures the sun during an eclipse.'

M.D.C.: 'How can you obscure the beam?'

C.: 'Just like the moon, we put a physical mask in the path of the light coming from the beam. And this allows us to look at the corona, the edge of the beam without being blinded by its bright centre.'

M.D.C.: 'Okay. What does the edge tell you?'

C.: 'It's interesting to know what the distribution of particles is. First of all does the beam have some symmetry or not? Secondly is it collimated? Well focused? Does it have the distribution we expect? If the particles are mostly concentrated in the core of the beam then we can more accurately predict how they will collide.'

M.D.C.: 'So, it's a predictive technique?'

C.: 'Yes, but diagnostic, as well. If we see a big halo and we see it drifting, then we know we're bound to run into problems.'

M.D.C.: 'Oh.'

C.: 'It's funny; when we use the coronagraph, we move the mirror away from the BSRT and we take all their light [laughs]. When we look at the corona, the BSRT is blind.'

C.: 'I see you are photographing one of their cameras.'

M.D.C.: 'Yes.'

C.: 'Can I ask why?'

M.D.C.: 'I mainly got interested in the fact that it's the only moment when the actual beam and the light it emits is extracted and recorded. Since it is something unimaginable... I mean the whole LHC, the proton beam, the collisions... the only image an outsider has of it is either a digital model or an impressive picture of the infrastructure. And then I heard about this department that extracts actual light from the beam in order to photograph it.'

C.: 'So now you are photographing a decommissioned BSRT camera?'

M.D.C.: 'Yes.'

C.: 'Okay.'

M.D.C.: 'Yesterday I found myself looking for rock samples that are in storage as exhibition objects in building 282. They were supposedly saved from every significant depth during the tunnel excavations at the end of the eighties. As if these objects could somehow still attest to what they witnessed.'

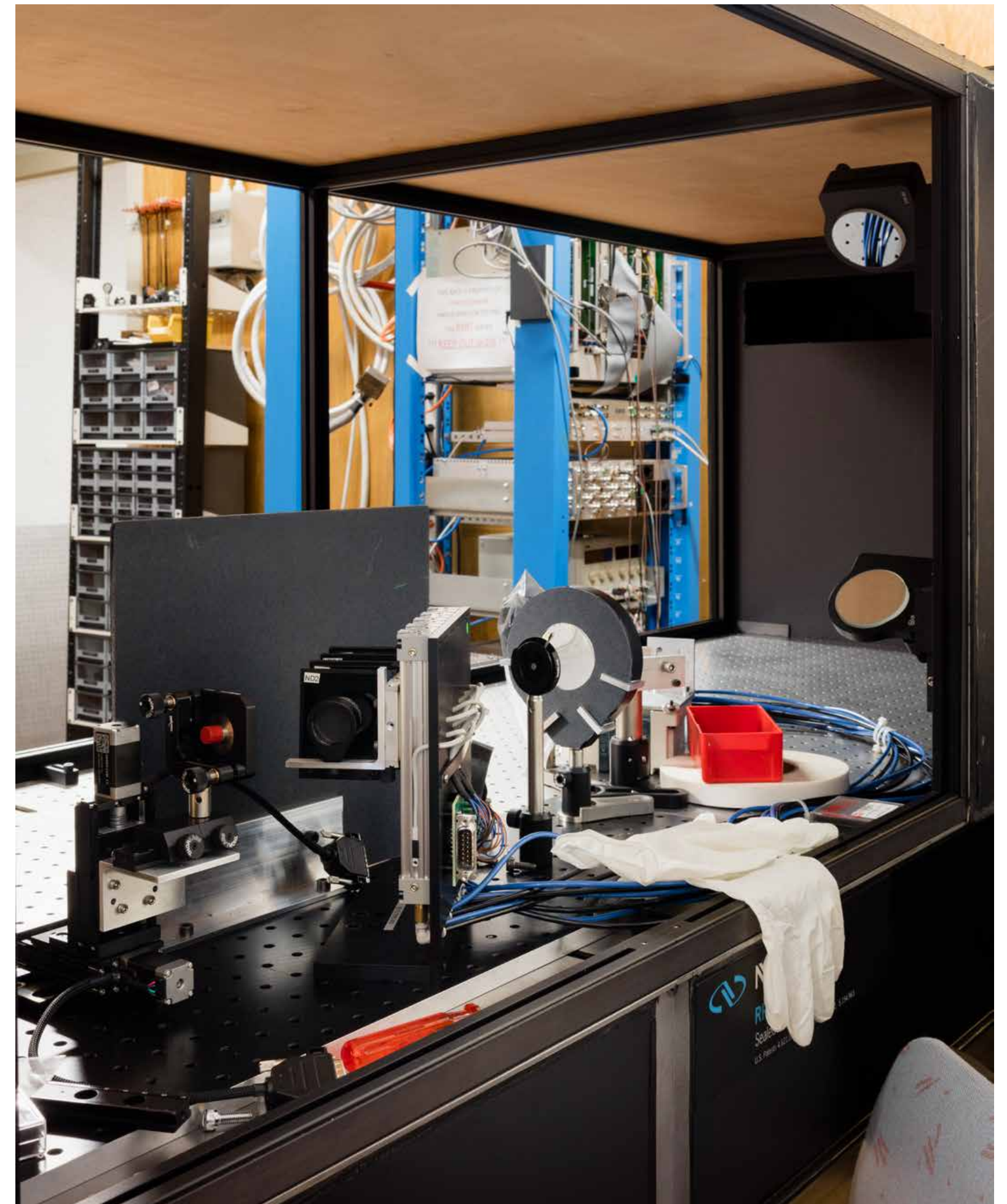
C.: 'I see. Did you find your rock samples?'

M.D.C.: 'The man in building 282 who claims to know every object there had never seen any rock samples.'

## BSRT, OPTICAL LAB

W.672.OPL

see next page



## BSRT, OPTICAL LAB

W.672.OPL

see next page





## BSRT, OPTICAL LAB

W.672.OPL



Still taken from 'CERN Data and BSRT - Beam 2 w/BEAM DUMP (8/9/2015; 110929; 1st)'

Description: 'CERN Transverse Synchrotron Light Monitors, BSRT - Beam 2 on August 9, 2015 at 110929 Central Time Zone, Energy Level: 450 GeV, Beam Intensity:  $1.61e + 10$ , Bunches: 2.

This video contains screenshots of the LHC3 Panel, Beam 2 [on 10 sec autorefresh] LHC Page 1 Panel, and Dashboard. Panel WITHOUT LHC Announcer.

LOOK ALSO IN THE SHADOW AREA around the beam. Faces seen throughout, including at 7 Sec; 14 Sec; 23 Sec; 32 Sec; 41 Sec; 50 Sec; 59 Sec; 1 Min 9 Sec; 1 Min 17 Sec.'

256 views

## BSRT, PUBLIC IMAGES

W.763.BSP



Still from 'UFO Sighting in Chemainus, BC' uploaded to youtube.com by WhiteOpsDude on 11.03.2011, viewed 18.04.2017. <<https://www.youtube.com/watch?v=AVQR8Beyar&f=58>>

Still and conversation taken and transcribed from the YouTube clip 'UFO Sighting in Chemainus, BC'

Description: 'Amazing UFO – January 22nd – Chemainus, BC.'  
39.947 views

<p>- 'I don't know what that is, it's like a meteorite or something - falling. It 's also [unintelligible] incredible, it's lighting up the whole sky orange. WHAT THE HELL IS THAT? YOU GUYS, IT'S A BIG UFO!'</p> <p>[door slams]</p> <p>- 'Really?'</p> <p>- 'Yes, it's a UFO.'</p> <p>- 'What's a UFO exactly? What's a U uh F O?'</p> <p>- 'It's an unidentified flying object, but it's swirling</p>	<p>around.'</p> <p>- 'How can you see?'</p> <p>- 'Oh MY GOD It is certainly a UFO. Look at it.'</p> <p>- 'Oh my goodness. Has any other... [unintelligible] I wonder if any... [unintelligible]'</p> <p>- 'I don't know but we're recording it. Look at it, it's flashing, different, it's flashing and... like a crop circle-design on it. What the hell? Scared the living shit out of us - excuse my language. It's definitely a UFO, what the hell is that? There's other little orbs shooting off of it.'</p>
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All camera-related remarks from a categorized list of all YouTube comments to the 'UFO sighting in Chemainus, BC'-video, as collected on 06.06.2017:

Zark Wonderbread:  
It's a perfect circle because it's completely out of focus. I don't know what the light is but it's obvious that this cameraman knows nothing about cameras. He saw clouds passing over it and thought he was seeing it rotating. There's dozens and dozens of better UFO videos out there. Especially ones without yuppie

idiots doing the filming.

tchallam:  
Looks like it could be an out of focus planet. Venus of Jupiter maybe?

DavidKimFX:  
Someone buy this dude a tripod. The patterns remind me of floaters in your eyeball. Very interesting footage. I would say based on the way the guy was talking that this is genuine.

Lifelong Lesson:  
@hoangkongfuey Not just that, but it's oval – completely ruling out the over-zoom explanation. Unless the video's aspect ratio is off...

Dankodotcom :  
im sure the experience was amazing for u guys but this vid is not!

truebluespiritmag :  
@Wutzupthere We don't place a lot of reference to the background due to privacy issues. However I was told that

## UFO SIGHTING IN CHEMAINUS



Still from a video made according to the protocol embedded in the comments to the YouTube clip: a streetlight, filmed out of focus with a handheld camera set to 50x zoom.

In accordance with the original clip, this footage was filmed on Penelakut Island with the camera pointed towards Chemainus.

<p>[door slams]</p> <p>- 'Look at this, Alex. It's got like little, it's got a little orb following it and one shot off it a minute ago.'</p> <p>- 'Oh my goodness.'</p> <p>- 'Okay, I gotta get down. Hey, I dropped my smoke. Did you see where it went? There it is.'</p> <p>[cut in sound and video] [appears to be on the phone]</p> <p>- 'Yes it was, well it is perfectly round right now,</p>	<p>but it looked... all of a sudden it was spinning earlier and it looked like it was trying to separate into two globs, like a cell, it looked like a cell trying to divide. I'm zoomed right in, it's, it's almost stationary.'</p> <p>- 'Ooh dad, dad!'</p> <p>- 'Oh, the top of it is clipped. Tif? The top of it is black. Like... I don't know, it looks, it looks flat at the top. But you can still see the rest of the circle it's just black and then there is a black dot on the bottom.'</p> <p>- 'DAD, DAD, DAD. Dad, please.'</p> <p>- 'What, Owen?'</p>
---	--

the camera filming the incident had a 50 x zoom, and you already know where it was filmed from. Thank you for your interest in both our video and true blue spirit website.

s noel irwin:  
wow, great shot of a street light. out of focus, The fathers answer, "the binoculars are broken"

Edim:  
The object looks really close to you in the video. Especially at 5:10. IT looks like

you're filming a street lamp with low focus settings on your camera.

David Gold:  
Please get a damn tripod! And don't zoom in so much. Thanks anyway.

shangaosurprise:  
It's so annoying to watch this. You zoomed in too closely to a bright light source. UFO or not, this is exactly the type of distortion that a video camera will display.

shangaosurprise:  
It's a soft focus on a point of light. Source, I'm a videographer.

Learn2FlyWithJesus:  
LoL! guy you should turn your AUTOFOCUS on

Cerey Runyon:  
No he needs t turn auto focus off~ then set it to infinity.

Jesus Christ:  
Wtf! get a flippin' tripod

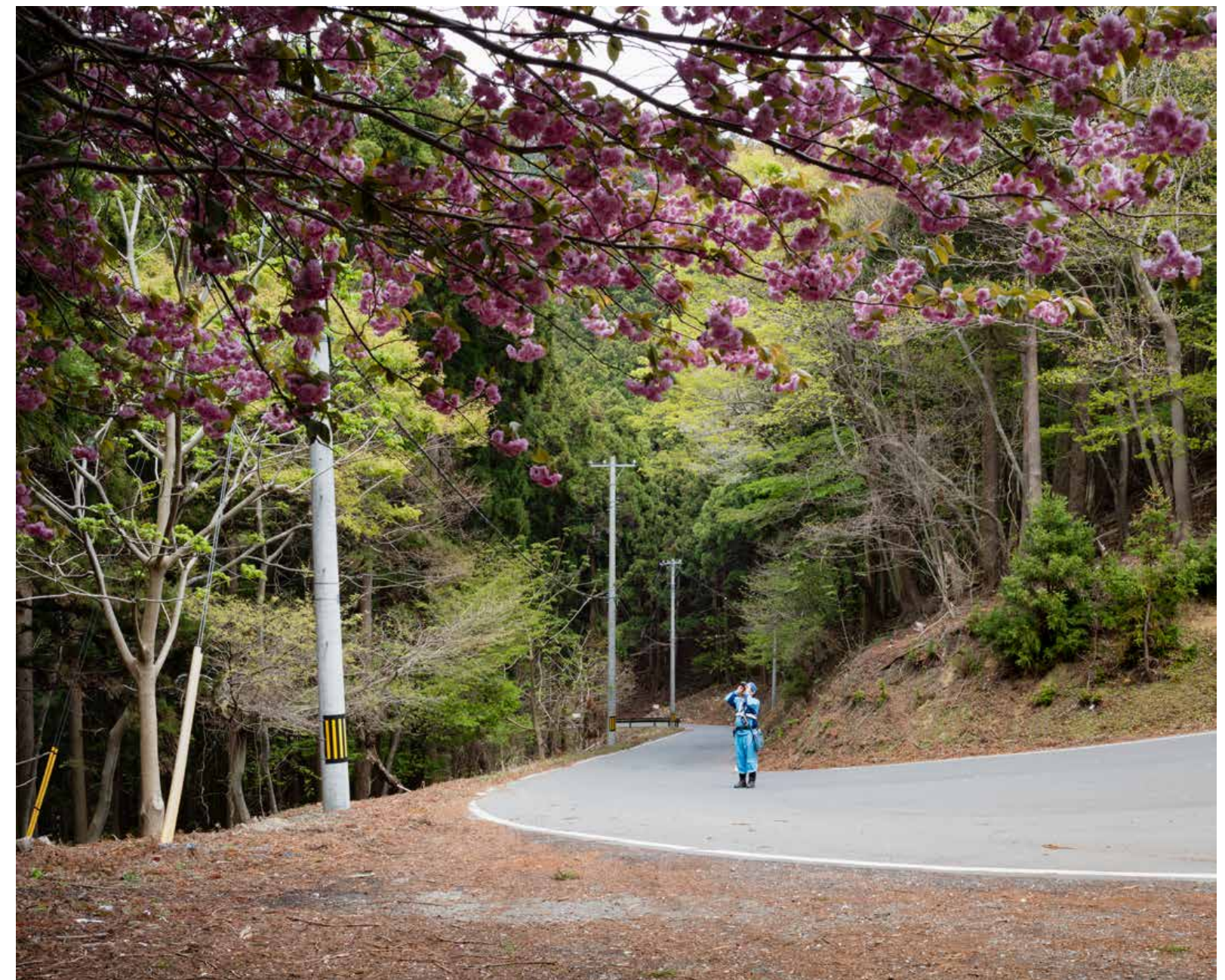
## UFO SIGHTING IN CHEMAINUS

- 'I saw a, I saw fog come from the top of it...'  
 - 'Yes, that's smoke, Owen.'  
 - 'Wow, I never saw something, such, such...'  
 - 'This is frigging incredible, Tif.'  
 - 'Dad, where are the biniocu, binocul...?'  
 - 'The binoculars are put away, they don't work properly.'  
 - 'Oh my goodness, Tif, I'm zoomed right in, there's a little black orb, stationary, at the bottom of it, sitting still.  
 What the hell is that...?  
 Okay, it's getting to that point now, it looks like it's gonna try and split in two, like there's pieces of it, oh... no, those might be clouds.  
 Well no, they're not. Because they're, they're double lines that keep going across it.  
 Look at that. Yeah It's, it's got dark, okay, it looks like... uh... you know how Saturn has rings around it? It looks like Saturn's rings revolving around it, but it's, they look like it's stationary on it, it's just turning.  
 It's, it's spinning and it has dark patches on it.'  
 - 'Dad, I saw someth... I saw s... '  
 - 'I can't even explain it, they look like cells, it looks like DNA...  
 THAT'S EXACTLY, OOOOH, it looks like twisted strands of DNA circling around it.  
 Or like chromosomes or something.  
 It looks like a cell, Tif, it looks like a giant frigging cell...  
 I don't know, but it's got a... an outer edge around it and then it's got like rings getting smaller and smaller to the centre but it's in kinda of uh almost... a pattern?  
 What the f-frigging heck is this thing?  
 And it's just, it's flashing and pulsing.  
 No it's not doing that right now, now it's just like...'  
 - 'Spinning.'  
 - 'Something... and the top of it is... it looks like the top of it is clipped off... but it's... like it's not perfectly round... but...  
 I have no idea, people have to be noticing this though, it's lighting up the whole sky.'

- [cough] 'Now the whole sky is like all lit up.'  
 - 'Like all the clouds are pulsing...  
 Yeah...  
 It is, it's doing it again, it is getting lopsided, Tif, it's spinning around and... yeah, it's spinning around lopsided, oh, oh, it's going like an egg.  
 Okay, okay, it looks like there's... a ball inside trying to get out.  
 And those chromosome things that were streaking across it look like they're squeezing it into three separate round balls.  
 Ugh.  
 Oh crap, it's behind a branch.  
 It's over Chemainus, yes.  
 It's, the clouds are pulsing orange.  
 My fucking god!  
 I have no idea what it is.  
 But it couldn't be a, uh, it couldn't be a flare though, because it's a round glob, it's like a glob of glowing plasma.'  
 - 'It's almost completely round, just the little black part at the top now.'  
 [low rumbling roar]  
 - 'Oh, it just disappeared,  
 OH MY GOD,  
 there's a... a HUGE helicopter up there, flying over or a huge plane.  
 Yeah, I think it's like a, no I think it's, no it's like an air force plane or something.  
 It's a huge bomber... and it disappeared.  
 It is, it's, it's circling.  
 Yes, it's like one of those big B52-bomber-things, you know, the low rumble engines, it's banking and circling around it.  
 They're, they're turning, Tif, it's turning back towards where the orb was, but the orb's gone now.'  
 - 'I'm still filming it.'  
 - 'The plane is flying around the perimeter now, it's making a wide sweep.'

## UFO SIGHTING IN CHEMAINUS

Y.359.CUI



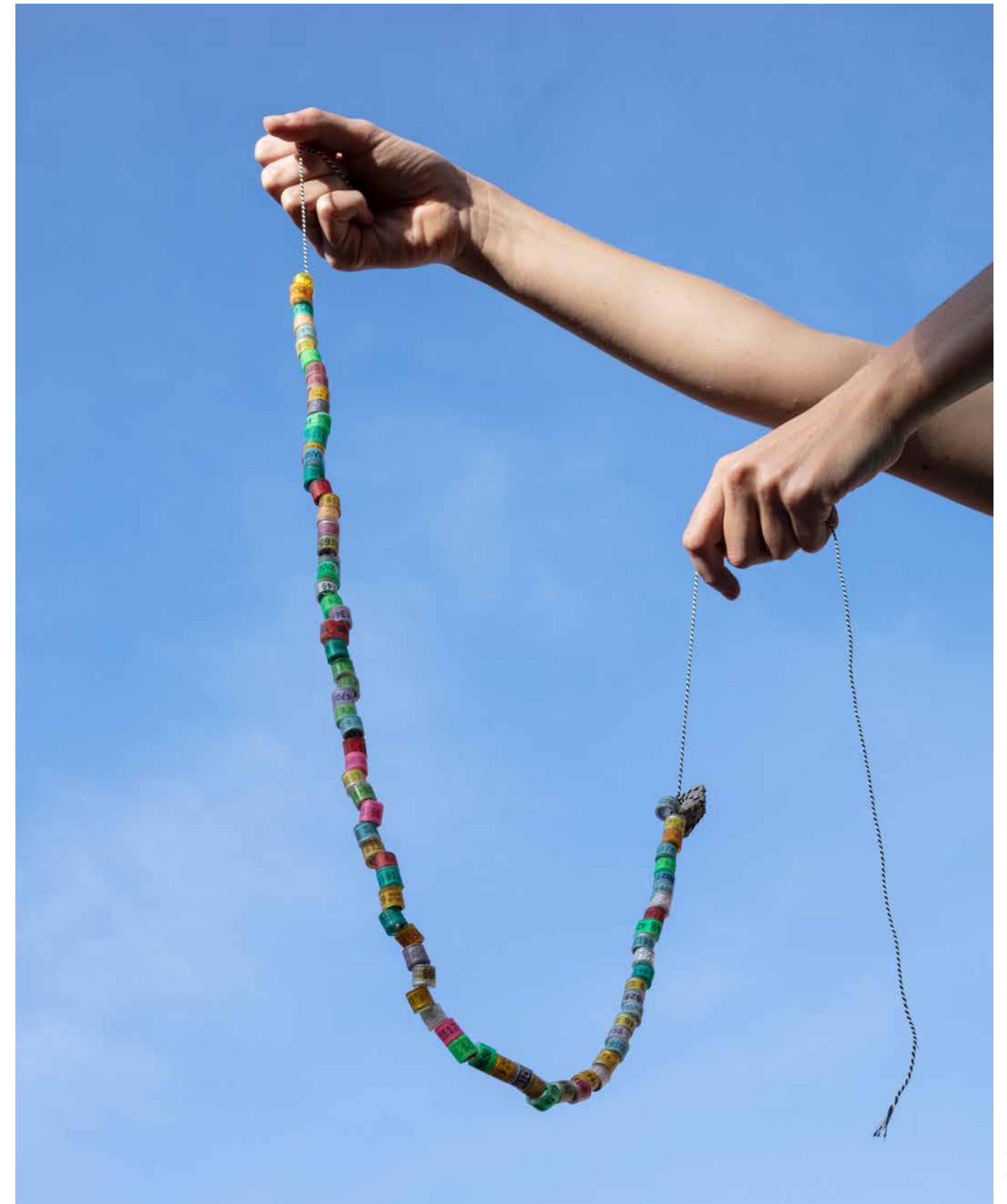
## A ROUTINE CONTROL OF EVERY UTILITY POLE WITH BINOCULARS

Y.365.UTI



# DOVECOTE IN A FORMER AIR WATCHTOWER [KLD]

Y.552.DAW



# PIGEON RINGS ON A ROPE [INTERNAL PERIMETER]

Y.797.PRR



The problem is, I really want my find to be a genuine man-made flint tool, therefore I can convince myself that all the pointers given are there to be seen in my find! Really, I need somebody who knows what they're looking for to take a look at my object, please?

Let's get the sad news out of the way first: I'm sorry to say, regarding your specimen, that it is a totally natural flake, 'popped' off a nodule by frost and subsequently knocked about a bit, probably by cultivation.

I would have to agree on that one. Sorry, it looks natural.

I think it would make another nice example of what looks like something but sadly isn't.

My guess would be natural, I'm afraid. Though it's always difficult from a picture hang on to it just in case. I myself have

found lots of things I thought might have been scrapers etc.

Looks natural to me. There is one other point as well, just because it's natural doesn't mean it wasn't used as a tool. If I'd seen this in the Neolithic period I would have used it rather than make one from scratch. It works a treat.

It does appear to have been retouched around the edge, although I'm not sure if it could just be natural edge damage?

I would say natural, no signs at all of knapping! And it's not the kind of flint associated with arrow heads. Just my opinion though.

Too regular shape to be natural. Looks like a leaf shaped arrow head to me !!

Definitely looks natural to me no signs of

retouching around the edge. Would like to see more pictures of it to be sure but I'm certain it's a natural flake I'm afraid.

Natural. These looklike flint artefacts were called Eoliths by the Victorian antiquarians.

I would not call these tools. Flaking as such is made by reworking tools but can be done naturally. You must look out for signs that a human shaped it.

In places the ground is covered with the stuff from where the natives broke it up and took the pieces they wanted to work on. If one was to paw through those sites he could have an amazing collection of imaginary tools. Not cool.

To distinguish between an artefact and a geofact (a flint that has been shaped by natural processes such as frost) use the following checklist: ask yourself: Is the flint

## FLINT

Y.815.FLT



Photograph by Emma Sanders: 'Rock samples', received by email on 26.02.2018

Dear Michiel,

The rock samples are still in our archive, just as listed. They have now been delivered to my office in building 33 if you still wish to see them (see the attached cellphone-photograph).

Regards,  
Emma

uniformly patinated? Is there the remains of a striking platform? Is there a striking point (positive bulb of percussion)? Have the edges been retouched? Is there pressure flaking on the surface? In the absence of any compelling features to indicate purposeful alteration by man, context becomes the most important

thing. If the pieces in question are not from a known paleo-site, in association with clearly altered objects or other remains, it is neither prudent nor scientifically possible to call them artefacts.

[Rod, Amiguru, C. Keyworth, C. Pearce, English Bob, omegamike, grumpyjohn,

batz52, geoman, kosmoceras, mr Ed, auspex, painshill]

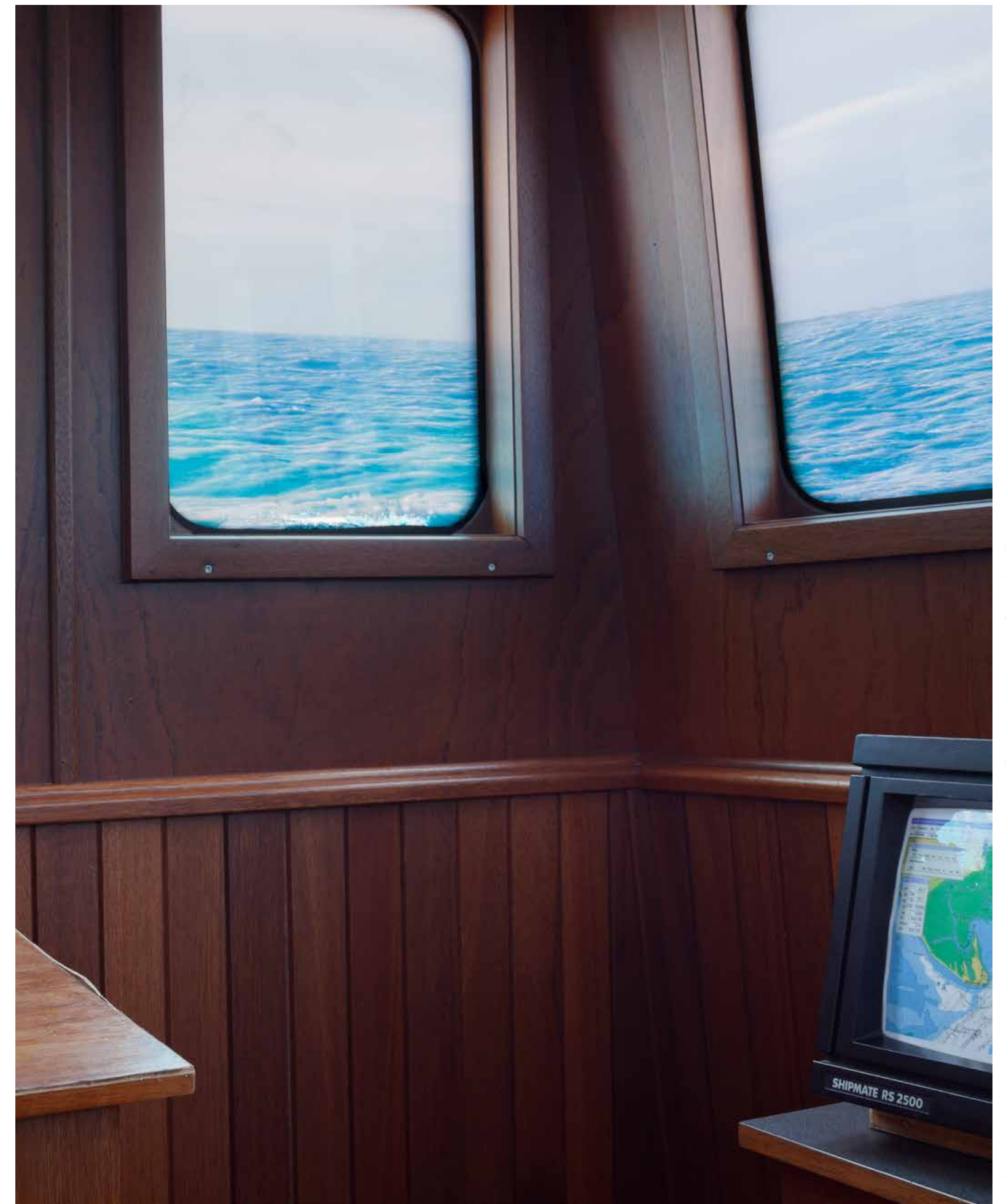
## RETRIEVED ROCK SAMPLES [CERN]

Y.863.RRS



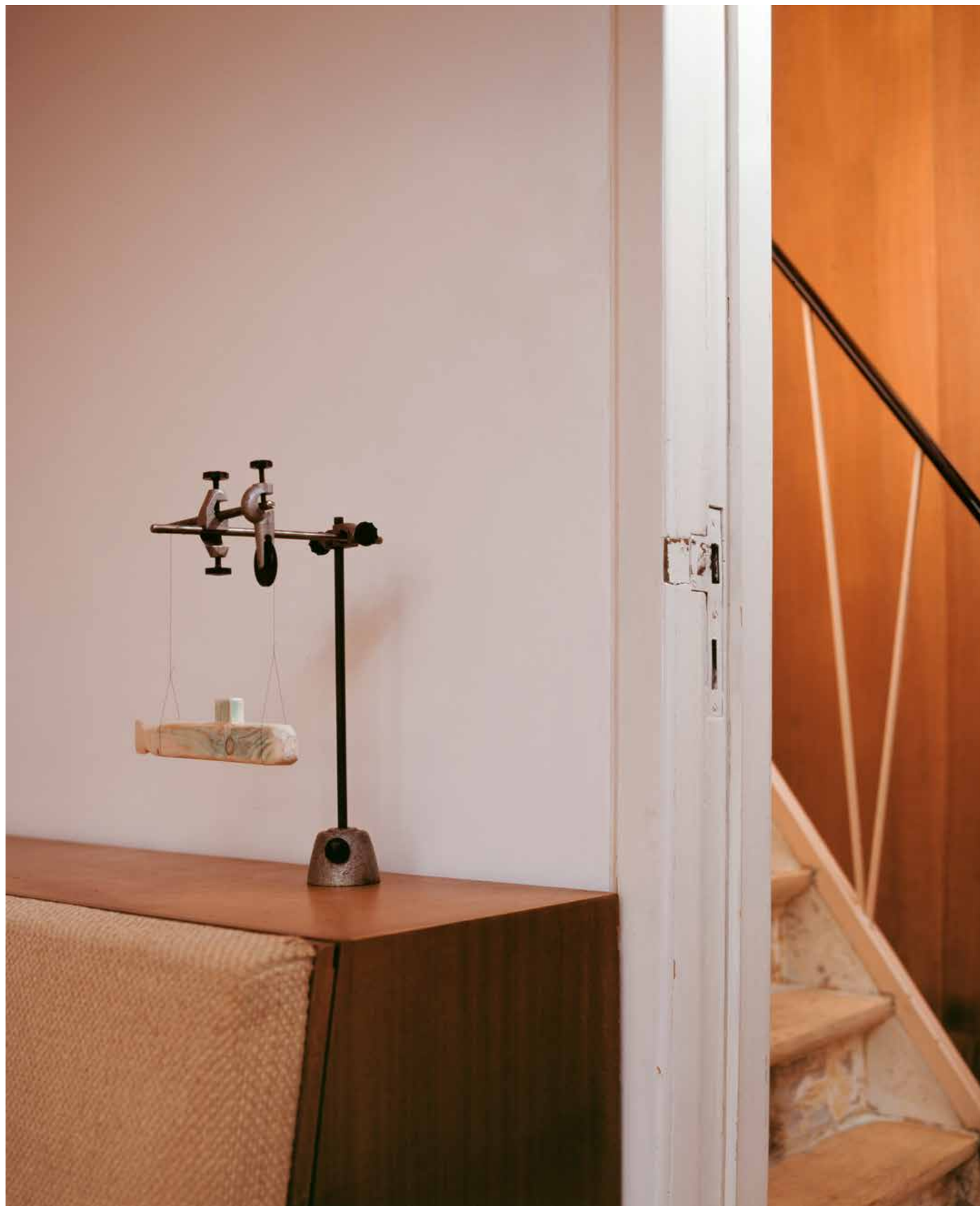
# CAVITY

Y.863.VAY



# BRIDGE [NAUTICAL]

Y.957.BRE



## WOODEN SCALE MODEL IN THE HOME OF A RETIRED SUBMARINER

Y.957.WSS



During a two hour tour, H.V. (head of the science collection) guided us from the library to the observatory and back. Along the way, he touched upon various rarities: one hundred ninety-five volumes of the Encyclopédie Méthodique (according to H.V. the most complete copy left in the world), the severed summit of Mont Blanc ('Actually de Saussure brought back a triangular piece of rock from just below the snow line near the summit'), an original copy of the publication on the infamous Lügensteine ('These date back to the time before the hoax was unveiled')...  
In guiding us from room to room, H.V. piled oddity upon curiosity. He showed a particular interest in all things fish-related.

## 12:13, FLASHLIGHT IN A DARK CORNER OF THE OVAL ROOM

Y.978.FLL





sciences, des arts et des métiers par une société des gens de lettres, Marc Michel Rey, Amsterdam, 1780, Tome 8, p. 18-19 (Hache)

No mention of 'bijl' in RÖST, L.C.M., Grote Winkler Prins, Encyclopedie in 26 delen (negende druk), Elsevier, Amsterdam, Antwerpen, 1993

Encyclopaedia Britannica, inc. The New Encyclopaedia Britannica. 15th ed., [1998 rev.], Encyclopaedia Britannica, Chicago, 1998, Volume 3, p. 367 (Cleaver)

'Axe', Wikipedia, viewed 15.11.2018, <<https://en.wikipedia.org/wiki/Axe>>

\*\*\*\*\* Forestry

DIDEROT, D., ALEMBERT, J. (eds.), Encyclopédie, ou Dictionnaire raisonné des sciences, des arts et des métiers par une société des gens de lettres, Marc Michel Rey, Amsterdam, 1780, Tome 7, p. 128 (Forestier)

RÖST, L.C.M., Grote Winkler Prins, Encyclopedie in 26 delen (negende druk), Elsevier, Amsterdam, Antwerpen, 1990, Deel 4, p. 582 (Boswachterij)

Encyclopaedia Britannica, inc. The New Encyclopaedia Britannica. 15th ed., [1998 rev.], Encyclopaedia Britannica, Chicago, 1998, Volume 4, p. 880-881 (Forestry)

'Forestry', Wikipedia, viewed 15.11.2018, <<https://en.wikipedia.org/wiki/Forestry>>

\*\*\*\*\* Silver birch

DIDEROT, D., ALEMBERT, J. (eds.), Encyclopédie, ou Dictionnaire raisonné des sciences, des arts et des métiers par une société des gens de lettres, Marc Michel Rey, Amsterdam, 1780, Tome 2, p. 362 (Bouleau) (no mention of 'Bouleau argenté')

RÖST, L.C.M., Grote Winkler Prins, Encyclopedie in 26 delen (negende druk), Elsevier, Amsterdam, Antwerpen, 1990, Deel 4, p. 82-83 (Berkenfamilie)

Encyclopaedia Britannica, inc. The New Encyclopaedia Britannica. 15th ed., [1998 rev.], Encyclopaedia Britannica, Chicago, 1998, Volume 2, p. 229 (Birch)

'Betula Pendula', Wikipedia, viewed 15.11.2018, <[https://en.wikipedia.org/wiki/Betula\\_pendula](https://en.wikipedia.org/wiki/Betula_pendula)>

\*\*\*\*\* Windmill

DIDEROT, D., ALEMBERT, J. (eds.), Encyclopédie, ou Dictionnaire raisonné des sciences, des arts et des métiers par une société des gens de lettres, Marc Michel Rey, Amsterdam, 1780, Tome 10, p. 811-812 (Moulin à vent)

RÖST, L.C.M., Grote Winkler Prins, Encyclopedie in 26 delen (negende druk), Elsevier, Amsterdam, Antwerpen, 1993, Deel 25, p. 8-13 (Windmolen)

Encyclopaedia Britannica, inc. The New Encyclopaedia Britannica. 15th ed., [1998 rev.], Encyclopaedia Britannica, Chicago, 1998, Volume 12, p. 698-699 (Windmill)

'Windmill', Wikipedia, viewed 15.11.2018, <<https://en.wikipedia.org/wiki/Windmill>>

\*\*\*\*\* Oil painting

DIDEROT, D., ALEMBERT, J. (eds.), Encyclopédie, ou Dictionnaire raisonné des sciences, des arts et des métiers par une société des gens de lettres, Marc Michel Rey, Amsterdam, 1780, Tome 12, p. 277-278 (Peinture à huile)

RÖST, L.C.M., Grote Winkler Prins, Encyclopedie in 26 delen (negende druk), Elsevier, Amsterdam, Antwerpen, 1992, Deel 17, p. 397 (Olieverf)

Encyclopaedia Britannica, inc. The New Encyclopaedia Britannica. 15th ed., [1998 rev.], Encyclopaedia Britannica, Chicago, 1998, Volume 25, p. 327-328 (The Art of Painting, Mediums, Oil)

'Oil painting', Wikipedia, viewed 15.11.2018, <[https://en.wikipedia.org/wiki/Oil\\_painting](https://en.wikipedia.org/wiki/Oil_painting)>

\*\*\*\*\* Carbon monoxide

No mention of 'Monoxyde de carbon' in DIDEROT, D., ALEMBERT, J. (eds.), Encyclopédie, ou Dictionnaire raisonné des sciences, des arts et des métiers par une société des gens de lettres, Marc Michel Rey, Amsterdam, 1780

RÖST, L.C.M., Grote Winkler Prins, Encyclopedie in 26 delen (negende druk), Elsevier, Amsterdam, Antwerpen, 1991, Deel 13, p. 527 (Koolmonoxide)

Encyclopaedia Britannica, inc. The New Encyclopaedia Britannica. 15th ed., [1998 rev.], Encyclopaedia Britannica, Chicago, 1998, Volume 2, p. 851 (Carbon Monoxide)

'Carbon monoxide', Wikipedia, viewed 15.11.2018, <[https://en.wikipedia.org/wiki/Carbon\\_monoxide](https://en.wikipedia.org/wiki/Carbon_monoxide)>

\*\*\*\*\* Moon

DIDEROT, D., ALEMBERT, J. (eds.), Encyclopédie, ou Dictionnaire raisonné des sciences, des arts et des métiers par une société des gens de lettres, Marc Michel Rey, Amsterdam, 1780, Tome 9, p. 726-742 (Lune)

RÖST, L.C.M., Grote Winkler Prins, Encyclopedie in 26 delen (negende druk), Elsevier, Amsterdam, Antwerpen, 1992, Deel 15, p. 123-129 (Maan)

Encyclopaedia Britannica, inc. The New Encyclopaedia Britannica. 15th ed., [1998 rev.], Encyclopaedia Britannica, Chicago, 1998, Volume 8, p. 299 (Moon)

'Moon', Wikipedia, viewed 15.11.2018, <<https://en.wikipedia.org/wiki/Moon>>

\*\*\*\*\* Keel

DIDEROT, D., ALEMBERT, J. (eds.), Encyclopédie, ou Dictionnaire raisonné des sciences, des arts et des métiers par une société des gens de lettres, Marc Michel Rey, Amsterdam, 1780, Tome 13, p. 711-713 (Quille)

RÖST, L.C.M., Grote Winkler Prins, Encyclopedie in 26 delen (negende druk), Elsevier, Amsterdam, Antwerpen, 1991, Deel 13, p. 328 (Kiel)

Encyclopaedia Britannica, inc. The New Encyclopaedia Britannica. 15th ed., [1998 rev.], Encyclopaedia Britannica, Chicago, 1998, Volume 6, p. 782 (Keel)

'Keel', Wikipedia, viewed 15.11.2018, <<https://en.wikipedia.org/wiki/Keel>>

\*\*\*\*\* This copy of Reference Guide is a paused record in the midst of an unrelenting cross-referential expansion.