

#MAVERICKSMONTH



# YD IMPACT & THE CAROLINA BAYS

FEATURING:

## GEORGE A. HOWARD



DEN OF LORE IS FREE TO CONSUME...  
BUT ISN'T FREE FOR US TO PRODUCE  
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EP. 051 - 10/08/2017

# DEN OF LORE

GEORGE A. HOWARD

YD COMET IMPACT RESEARCHER

1  
00:00:03,160 --> 00:00:10,470

[Music]

2  
00:00:15,749 --> 00:00:12,950

good evening ladies and gentlemen

3  
00:00:18,390 --> 00:00:15,759

welcome to the show i am your host

4  
00:00:20,710 --> 00:00:18,400

chris george zuger and you have entered

5  
00:00:22,870 --> 00:00:20,720

the den of lore i apparently am clipping

6  
00:00:24,790 --> 00:00:22,880

something fierce today

7  
00:00:26,790 --> 00:00:24,800

the levels are up because the

8  
00:00:29,189 --> 00:00:26,800

temperature is up we are in the middle

9  
00:00:31,349 --> 00:00:29,199

of the summer and do i have a show for

10  
00:00:33,670 --> 00:00:31,359

you we're going to be learning some cool

11  
00:00:36,950 --> 00:00:33,680

[h\_\_h] courtesy of one of the original

12  
00:00:39,670 --> 00:00:36,960

researchers behind the younger driest

13  
00:00:42,630 --> 00:00:39,680

impact hypothesis paper way back in 2006

14

00:00:45,430 --> 00:00:42,640

mr george howard from cosmic tusk is on

15

00:00:47,190 --> 00:00:45,440

the program tonight and oh my dear god

16

00:00:50,869 --> 00:00:47,200

in heaven do we have

17

00:00:52,869 --> 00:00:50,879

a show for you um and so please do grab

18

00:00:55,830 --> 00:00:52,879

your glasses of scotch pull your chair

19

00:00:57,830 --> 00:00:55,840

up to the fire and uh let's let's kick

20

00:00:59,830 --> 00:00:57,840

some let's kick some younger driest ass

21

00:01:02,869 --> 00:00:59,840

tonight uh yeah

22

00:01:04,070 --> 00:01:02,879

i've got a uh my still my my bottle of

23

00:01:06,870 --> 00:01:04,080

18 year

24

00:01:09,429 --> 00:01:06,880

uh glenn brothers sitting beside me

25

00:01:11,350 --> 00:01:09,439

and i know that um george apparently

26

00:01:12,710 --> 00:01:11,360

sent me a bottle of scotch and

27

00:01:14,310 --> 00:01:12,720

fortunately i was out of the house all

28

00:01:16,230 --> 00:01:14,320

day i could not get it so i have to

29

00:01:19,429 --> 00:01:16,240

apologize to him

30

00:01:21,510 --> 00:01:19,439

it'll wait another day oh there we go

31

00:01:24,230 --> 00:01:21,520

so again i want to be able to thank our

32

00:01:26,630 --> 00:01:24,240

patrons first and foremost uh for

33

00:01:27,910 --> 00:01:26,640

keeping us on the air uh again if you

34

00:01:29,350 --> 00:01:27,920

want to be able to support the program

35

00:01:31,910 --> 00:01:29,360

make sure that we can continue giving

36

00:01:33,990 --> 00:01:31,920

you this content go to [patreon.com](https://www.patreon.com)

37

00:01:35,670 --> 00:01:34,000

forward slash den of lore and uh become

38

00:01:38,950 --> 00:01:35,680

a patron you can support the show for as

39

00:01:40,390 --> 00:01:38,960

little as one dollar a month and ensure

40

00:01:43,270 --> 00:01:40,400

that my wife does not ask me to shut

41

00:01:43,990 --> 00:01:43,280

this down because it is costing a lot

42

00:01:44,789 --> 00:01:44,000

too

43

00:01:46,230 --> 00:01:44,799

well

44

00:01:48,630 --> 00:01:46,240

costs about as much as our car payment

45

00:01:49,990 --> 00:01:48,640

in some some months but uh we

46

00:01:51,350 --> 00:01:50,000

love doing this

47

00:01:54,870 --> 00:01:51,360

and we believe that we're giving a

48

00:01:56,389 --> 00:01:54,880

valuable uh show to people out there and

49

00:01:58,630 --> 00:01:56,399

if i did not have so many people

50

00:02:01,190 --> 00:01:58,640

listening to it i wouldn't do it and i

51  
00:02:03,270 --> 00:02:01,200  
get letters all the time so first of all

52  
00:02:04,950 --> 00:02:03,280  
i want to thank all the people out there

53  
00:02:07,429 --> 00:02:04,960  
who are tuning in

54  
00:02:11,430 --> 00:02:07,439  
but especially uh mark cudalano uh ellen

55  
00:02:14,550 --> 00:02:11,440  
mccurdy joshua matic wayne uh roses

56  
00:02:16,949 --> 00:02:14,560  
mrs fox uh jared thompson uh who are

57  
00:02:19,110 --> 00:02:16,959  
part of our master's program in addition

58  
00:02:21,830 --> 00:02:19,120  
to kevin fluffy who is also part of the

59  
00:02:23,350 --> 00:02:21,840  
masters program they get a master class

60  
00:02:26,150 --> 00:02:23,360  
once a month so that's essentially we

61  
00:02:29,430 --> 00:02:26,160  
bring a guest in and we have a private

62  
00:02:30,550 --> 00:02:29,440  
uh patron only uh well presentation for

63  
00:02:32,630 --> 00:02:30,560

you all

64

00:02:35,509 --> 00:02:32,640

in addition to our other patrons uh

65

00:02:37,030 --> 00:02:35,519

denise from magical egypt hobby who is

66

00:02:40,550 --> 00:02:37,040

actually uh sending in through the

67

00:02:43,430 --> 00:02:40,560

support page on deadoflord.com uh

68

00:02:44,869 --> 00:02:43,440

sentient michael eckhoff atlantic koosh

69

00:02:46,070 --> 00:02:44,879

who uh said i don't need to give him a

70

00:02:50,550 --> 00:02:46,080

shout out but i just love saying that

71

00:02:53,030 --> 00:02:50,560

name atlanta koosh a dean kenward

72

00:02:54,869 --> 00:02:53,040

and i believe i got everyone on there so

73

00:02:58,070 --> 00:02:54,879

again thank you very much for supporting

74

00:03:00,630 --> 00:02:58,080

the program and ensuring that we can

75

00:03:03,509 --> 00:03:00,640

keep the den of lore going week after

76

00:03:04,430 --> 00:03:03,519

week after week um and again you can go

77

00:03:11,149 --> 00:03:04,440

to

78

00:03:13,430 --> 00:03:11,159

uh

79

00:03:15,990 --> 00:03:13,440

shop.denver.com maybe buy a t-shirt

80

00:03:18,229 --> 00:03:16,000

maybe buy a nice den of lore mug

81

00:03:20,550 --> 00:03:18,239

that you uh see here i actually was

82

00:03:21,830 --> 00:03:20,560

drinking some coffee out of this myself

83

00:03:23,350 --> 00:03:21,840

and um

84

00:03:25,030 --> 00:03:23,360

you know let's see if i can my camera's

85

00:03:26,790 --> 00:03:25,040

a little bit closer so yeah we do have

86

00:03:28,790 --> 00:03:26,800

we do have the swag so if you do want to

87

00:03:31,430 --> 00:03:28,800

be able to represent your colors you can

88

00:03:34,309 --> 00:03:31,440

do that as well um and first and

89

00:03:35,670 --> 00:03:34,319

foremost uh george how are you doing

90

00:03:37,190 --> 00:03:35,680

oh i'm well chris thank you very much

91

00:03:38,789 --> 00:03:37,200

for inviting me on well thank you very

92

00:03:40,470 --> 00:03:38,799

much and george if you do check out the

93

00:03:43,270 --> 00:03:40,480

show up to dental floor i am also having

94

00:03:47,589 --> 00:03:43,280

a summer sale 20 off um you can check

95

00:03:50,149 --> 00:03:47,599

the promo code like right here

96

00:03:52,630 --> 00:03:50,159

uh lore20 you can you can save some cash

97

00:03:53,670 --> 00:03:52,640

get a nice uh buddha t-shirt maybe maybe

98

00:03:55,190 --> 00:03:53,680

uh some

99

00:03:56,630 --> 00:03:55,200

you know maybe raise your vibration with

100

00:03:58,470 --> 00:03:56,640

uh with some alchemy t-shirts that we

101  
00:04:00,390 --> 00:03:58,480  
got on there t-shirts tanks we got it

102  
00:04:02,630 --> 00:04:00,400  
all women's men's all colors

103  
00:04:04,550 --> 00:04:02,640  
i will outfit the entire family

104  
00:04:06,630 --> 00:04:04,560  
[Laughter]

105  
00:04:11,509 --> 00:04:06,640  
i'll keep the uh single malt scotch

106  
00:04:17,189 --> 00:04:13,670  
uh yes and mark catalano it is atlantic

107  
00:04:19,990 --> 00:04:17,199  
kosh kush like yes like

108  
00:04:22,870 --> 00:04:20,000  
atlantic koosh as in you know koosh out

109  
00:04:24,710 --> 00:04:22,880  
from the atlantic instead of the pacific

110  
00:04:26,150 --> 00:04:24,720  
or indian kush no it's it's atlantic

111  
00:04:27,189 --> 00:04:26,160  
koosh someone is a really cool name that

112  
00:04:29,270 --> 00:04:27,199  
someone had

113  
00:04:31,189 --> 00:04:29,280

um we usually do a

114

00:04:32,390 --> 00:04:31,199

a little opening intro segment here

115

00:04:33,909 --> 00:04:32,400

you're the first guest that we've had in

116

00:04:37,189 --> 00:04:33,919

a while who i've actually been able to

117

00:04:39,189 --> 00:04:37,199

get to want to engage and join in on the

118

00:04:42,710 --> 00:04:39,199

fun stuff that we usually do here

119

00:04:44,550 --> 00:04:42,720

and um we we get some some interesting

120

00:04:45,510 --> 00:04:44,560

uh messages every night so you could

121

00:04:47,670 --> 00:04:45,520

just wave

122

00:04:49,270 --> 00:04:47,680

we could see you it's great yeah i know

123

00:04:51,270 --> 00:04:49,280

i've got a one of the cleaning folks in

124

00:04:52,629 --> 00:04:51,280

my office just came in oh it's just like

125

00:04:54,830 --> 00:04:52,639

out out

126  
00:04:57,270 --> 00:04:54,840

busy

127  
00:04:58,710 --> 00:04:57,280

yeah we get some letters in every now

128  
00:05:00,950 --> 00:04:58,720

and again and usually we get them in

129  
00:05:03,510 --> 00:05:00,960

through the youtube channel um and you

130  
00:05:06,070 --> 00:05:03,520

know we we get some very some very long

131  
00:05:08,310 --> 00:05:06,080

emails very thoughtful um you know

132  
00:05:10,310 --> 00:05:08,320

introspective emails that the people who

133  
00:05:11,990 --> 00:05:10,320

just you know just enjoy the show and

134  
00:05:14,150 --> 00:05:12,000

they want to discuss it and then every

135  
00:05:16,230 --> 00:05:14,160

now and again i get emails such as or

136  
00:05:19,350 --> 00:05:16,240

just comments such as this and this one

137  
00:05:21,310 --> 00:05:19,360

comes from allison jane and she spells

138  
00:05:23,029 --> 00:05:21,320

allison with a y so

139

00:05:24,950 --> 00:05:23,039

a-l-l-y-s-o-n like you couldn't get any

140

00:05:27,270 --> 00:05:24,960

[h\_\_\h] more pretentious than that

141

00:05:29,110 --> 00:05:27,280

um so and i'm saying this because well

142

00:05:31,590 --> 00:05:29,120

this is one of those bad email comments

143

00:05:33,350 --> 00:05:31,600

that we get every now and again

144

00:05:34,870 --> 00:05:33,360

and um yeah

145

00:05:37,590 --> 00:05:34,880

so this was actually on a comment from

146

00:05:38,790 --> 00:05:37,600

one of our new uh oh this is getting a

147

00:05:40,310 --> 00:05:38,800

little loose from one of our new

148

00:05:42,550 --> 00:05:40,320

segments crypto corner that denver

149

00:05:44,629 --> 00:05:42,560

michael's the great denver michaels and

150

00:05:46,790 --> 00:05:44,639

i we do once a week and we talk about

151  
00:05:48,629 --> 00:05:46,800  
crypto zoology stuff we've been doing

152  
00:05:50,390 --> 00:05:48,639  
bigfoot uh we've had a couple guests on

153  
00:05:53,430 --> 00:05:50,400  
the last couple of weeks very short

154  
00:05:55,029 --> 00:05:53,440  
segment about half an hour and she came

155  
00:05:56,469 --> 00:05:55,039  
on and she said

156  
00:05:58,550 --> 00:05:56,479  
chris

157  
00:06:01,909 --> 00:05:58,560  
you are the worst

158  
00:06:04,550 --> 00:06:01,919  
radio program host i have ever heard or

159  
00:06:06,309 --> 00:06:04,560  
sorry i've ever had the displeasure

160  
00:06:09,270 --> 00:06:06,319  
displeasure she actually wrote out the

161  
00:06:11,830 --> 00:06:09,280  
full displeasure of listening to your

162  
00:06:14,390 --> 00:06:11,840  
foul language is not necessary your

163  
00:06:17,510 --> 00:06:14,400

jokes are not funny or appropriate for

164

00:06:19,510 --> 00:06:17,520

this cryptid show and last but not least

165

00:06:21,510 --> 00:06:19,520

why the hell she used the word hell in

166

00:06:23,909 --> 00:06:21,520

there why the hell would you interview a

167

00:06:26,629 --> 00:06:23,919

person about the mothman sightings when

168

00:06:28,230 --> 00:06:26,639

you don't even believe in the creature

169

00:06:29,670 --> 00:06:28,240

two thumbs down

170

00:06:32,070 --> 00:06:29,680

boo

171

00:06:35,350 --> 00:06:32,080

um and i wrote she needs a scotch oh

172

00:06:37,350 --> 00:06:35,360

geez she needs she needs something um

173

00:06:38,950 --> 00:06:37,360

and i i wrote a nice and actually i

174

00:06:40,469 --> 00:06:38,960

actually liked the comment because it

175

00:06:42,150 --> 00:06:40,479

was an actual comment it wasn't the

176

00:06:44,070 --> 00:06:42,160

usual troll comment that we get on the

177

00:06:46,390 --> 00:06:44,080

channel you know someone going oh you're

178

00:06:47,670 --> 00:06:46,400

part of the illuminati

179

00:06:49,430 --> 00:06:47,680

you know

180

00:06:51,350 --> 00:06:49,440

god will will

181

00:06:53,830 --> 00:06:51,360

avenge your

182

00:06:55,430 --> 00:06:53,840

worship of moloch the dark lord and

183

00:06:56,950 --> 00:06:55,440

usually for that i just say well that's

184

00:06:58,550 --> 00:06:56,960

great you know i'll tell my brethren

185

00:07:00,390 --> 00:06:58,560

about that and you know the next

186

00:07:02,309 --> 00:07:00,400

barbecue virgin sacrifice and we'll send

187

00:07:03,830 --> 00:07:02,319

some people out and we'll we will come

188

00:07:05,110 --> 00:07:03,840

get your family and we'll use them at

189

00:07:07,029 --> 00:07:05,120

the next

190

00:07:08,070 --> 00:07:07,039

sacrifice barbecue slash pancake

191

00:07:11,270 --> 00:07:08,080

breakfast

192

00:07:12,390 --> 00:07:11,280

um you know so uh my my general response

193

00:07:13,670 --> 00:07:12,400

is

194

00:07:14,950 --> 00:07:13,680

and i'm not gonna go through the whole

195

00:07:16,629 --> 00:07:14,960

thing no actually you don't [h\_\_h] i'll

196

00:07:17,510 --> 00:07:16,639

just go through the whole thing i wrote

197

00:07:19,589 --> 00:07:17,520

off

198

00:07:21,110 --> 00:07:19,599

basically stating that um you know i'll

199

00:07:23,110 --> 00:07:21,120

usually for trolls i'll delete the

200

00:07:25,110 --> 00:07:23,120

comment because

201  
00:07:26,230 --> 00:07:25,120  
i have no [h\_\_h] time for that [h\_\_h]

202  
00:07:27,990 --> 00:07:26,240  
um

203  
00:07:29,909 --> 00:07:28,000  
but i said okay this is honest feedback

204  
00:07:31,909 --> 00:07:29,919  
she presented her argument she gave me

205  
00:07:33,430 --> 00:07:31,919  
honest critique i'm going to at least

206  
00:07:34,390 --> 00:07:33,440  
listen to that and i'm going to keep it

207  
00:07:35,990 --> 00:07:34,400  
on there

208  
00:07:37,350 --> 00:07:36,000  
but i said okay you know i'm at least

209  
00:07:38,390 --> 00:07:37,360  
i'm not i'm going to address this but

210  
00:07:39,430 --> 00:07:38,400  
you're not going to like the answer and

211  
00:07:41,589 --> 00:07:39,440  
i wrote

212  
00:07:43,110 --> 00:07:41,599  
um and i'm just

213  
00:07:45,029 --> 00:07:43,120

going to add this in here

214

00:07:46,710 --> 00:07:45,039

i didn't actually add this part but you

215

00:07:48,629 --> 00:07:46,720

know dear [\h\_\_\h] face

216

00:07:50,469 --> 00:07:48,639

uh one i'm not a professional by any

217

00:07:52,950 --> 00:07:50,479

stretch i do this for fun

218

00:07:55,189 --> 00:07:52,960

i know i'm far from a great from a great

219

00:07:57,270 --> 00:07:55,199

host like i i i've got my on days i've

220

00:07:59,670 --> 00:07:57,280

got my off days anyways

221

00:08:01,189 --> 00:07:59,680

uh you know but i'm genuine i i at least

222

00:08:02,869 --> 00:08:01,199

if i'm on here i'm not trying to pretend

223

00:08:05,589 --> 00:08:02,879

to be somebody i'm not

224

00:08:08,869 --> 00:08:05,599

um claiming that i'm a time traveling

225

00:08:11,589 --> 00:08:08,879

uh you know mars soldier from the past

226

00:08:13,670 --> 00:08:11,599

slash future slash the president

227

00:08:15,430 --> 00:08:13,680

with you know and i'm at least here and

228

00:08:16,950 --> 00:08:15,440

i'm i'm i'm

229

00:08:18,070 --> 00:08:16,960

this this is this is what you get this

230

00:08:19,430 --> 00:08:18,080

is what you get

231

00:08:20,790 --> 00:08:19,440

uh and

232

00:08:22,950 --> 00:08:20,800

you know for the hundreds of thousands

233

00:08:24,150 --> 00:08:22,960

of people who listen and watch the show

234

00:08:25,830 --> 00:08:24,160

and trust me at this point we've got

235

00:08:27,350 --> 00:08:25,840

hundreds of thousands of people who've

236

00:08:30,629 --> 00:08:27,360

watched this show

237

00:08:33,190 --> 00:08:30,639

in 167 countries

238

00:08:34,550 --> 00:08:33,200

um that you know they like it so i do

239

00:08:35,990 --> 00:08:34,560

this for them and i do this for the

240

00:08:37,190 --> 00:08:36,000

people who come to the channel every

241

00:08:40,070 --> 00:08:37,200

single week

242

00:08:42,469 --> 00:08:40,080

two it's my channel and i will [h\_\_\h]

243

00:08:44,389 --> 00:08:42,479

swear if you [h\_\_\h] want to amen this

244

00:08:46,470 --> 00:08:44,399

is my mo the reason people watch this

245

00:08:47,080 --> 00:08:46,480

show is because i've i'd

246

00:08:49,509 --> 00:08:47,090

like

247

00:08:51,509 --> 00:08:49,519

[Music]

248

00:08:53,110 --> 00:08:51,519

you you get to watch me drink and make

249

00:08:54,710 --> 00:08:53,120

an ass myself for three hours while we

250

00:08:56,550 --> 00:08:54,720

learn some cool [h\_\_\h]

251  
00:08:58,630 --> 00:08:56,560  
why would you like your show well thank

252  
00:09:00,150 --> 00:08:58,640  
you very much i'm a big big podcast fan

253  
00:09:02,790 --> 00:09:00,160  
list to a lot of it and you're you're a

254  
00:09:05,030 --> 00:09:02,800  
fine podcaster and uh you get great

255  
00:09:07,110 --> 00:09:05,040  
guests well there you go and you

256  
00:09:08,790 --> 00:09:07,120  
continue to get better guests and um

257  
00:09:10,230 --> 00:09:08,800  
well this is where i continued i'm like

258  
00:09:11,750 --> 00:09:10,240  
where the [h\_\_\h] do you get to tell me

259  
00:09:13,509 --> 00:09:11,760  
what what and what is not appropriate on

260  
00:09:15,350 --> 00:09:13,519  
my own [h\_\_\h] channel like you know

261  
00:09:17,190 --> 00:09:15,360  
this is a free goddamn country and i

262  
00:09:18,389 --> 00:09:17,200  
will say whatever the [h\_\_\h] i want within

263  
00:09:20,870 --> 00:09:18,399

reason again

264

00:09:22,550 --> 00:09:20,880

and if you don't like that [\h\_\_\h] off and

265

00:09:25,430 --> 00:09:22,560

don't [\h\_\_\h] watch if you don't [\h\_\_\h]

266

00:09:26,470 --> 00:09:25,440

like it uh four and the person i was

267

00:09:27,910 --> 00:09:26,480

interviewing was actually i wasn't

268

00:09:29,670 --> 00:09:27,920

interviewing it was denver michael's and

269

00:09:31,750 --> 00:09:29,680

i we were doing the show together and

270

00:09:34,070 --> 00:09:31,760

he's my friend we both do the exact same

271

00:09:35,670 --> 00:09:34,080

thing the reason we like each other is

272

00:09:38,150 --> 00:09:35,680

because we're very much

273

00:09:40,150 --> 00:09:38,160

alike except for his southern accent is

274

00:09:41,750 --> 00:09:40,160

just so goddamn sexy

275

00:09:45,670 --> 00:09:41,760

and it's he's one of the reasons my

276

00:09:50,389 --> 00:09:47,750

so uh yeah

277

00:09:52,310 --> 00:09:50,399

he's got a good way about it exactly and

278

00:09:53,990 --> 00:09:52,320

you know we we don't we don't change for

279

00:09:56,470 --> 00:09:54,000

for nobody and point five i believe in

280

00:09:58,310 --> 00:09:56,480

the possibility of mothman um and most

281

00:10:00,630 --> 00:09:58,320

cryptids i just it's just that no one's

282

00:10:03,190 --> 00:10:00,640

actually gotten any footage of mothman

283

00:10:05,269 --> 00:10:03,200

uh worth a damn and any an eyewitness

284

00:10:06,470 --> 00:10:05,279

accounts are basically the worst form of

285

00:10:08,470 --> 00:10:06,480

you know evidence you could possibly

286

00:10:09,430 --> 00:10:08,480

have it's completely unreliable

287

00:10:10,230 --> 00:10:09,440

um

288

00:10:11,750 --> 00:10:10,240

like

289

00:10:12,870 --> 00:10:11,760

even even with

290

00:10:16,710 --> 00:10:12,880

pictures that we've had on here and

291

00:10:18,710 --> 00:10:16,720

denver and i have had uh images of

292

00:10:20,870 --> 00:10:18,720

a ufo that his sister had caught and

293

00:10:23,910 --> 00:10:20,880

like took several pictures of and if she

294

00:10:24,949 --> 00:10:23,920

had said well i saw ufo

295

00:10:26,550 --> 00:10:24,959

the only thing i could say was like

296

00:10:29,110 --> 00:10:26,560

that's very interesting but she had

297

00:10:31,350 --> 00:10:29,120

actual pictures of it so that kind of

298

00:10:33,990 --> 00:10:31,360

evidence with the corroborating evidence

299

00:10:35,190 --> 00:10:34,000

is more credible if it's actually clear

300

00:10:36,630 --> 00:10:35,200

these are some of the clearest pictures

301  
00:10:38,870 --> 00:10:36,640  
of ufos that i've actually seen in a

302  
00:10:40,790 --> 00:10:38,880  
very long time

303  
00:10:42,470 --> 00:10:40,800  
so yeah just but just

304  
00:10:44,550 --> 00:10:42,480  
that eyewitness accounts can be the

305  
00:10:46,389 --> 00:10:44,560  
worst kind without actual other evidence

306  
00:10:48,310 --> 00:10:46,399  
to back it up so i've been very

307  
00:10:51,110 --> 00:10:48,320  
frustrated by that because no one's got

308  
00:10:53,750 --> 00:10:51,120  
a goddamn picture of goddamn mothman so

309  
00:10:55,350 --> 00:10:53,760  
um uh ally son

310  
00:10:56,710 --> 00:10:55,360  
uh jane

311  
00:10:57,910 --> 00:10:56,720  
uh

312  
00:11:00,150 --> 00:10:57,920  
well you know

313  
00:11:01,829 --> 00:11:00,160

that's you know as as i said you gave me

314

00:11:04,550 --> 00:11:01,839

two thumbs down well i can [\h\_\_\h] do

315

00:11:05,990 --> 00:11:04,560

that too so see i got i got some i got

316

00:11:08,630 --> 00:11:06,000

some thumbs right here

317

00:11:10,710 --> 00:11:08,640

um and yeah that was the that was a

318

00:11:12,829 --> 00:11:10,720

letter of note that i got today so that

319

00:11:14,389 --> 00:11:12,839

was the opening segment

320

00:11:16,949 --> 00:11:14,399

uh

321

00:11:18,550 --> 00:11:16,959

that's how we roll here

322

00:11:20,389 --> 00:11:18,560

well you got a lot of integrity to bring

323

00:11:21,750 --> 00:11:20,399

a critic on as you're opening comments

324

00:11:23,509 --> 00:11:21,760

so well

325

00:11:25,269 --> 00:11:23,519

again for the critics it's like the

326

00:11:26,310 --> 00:11:25,279

critics some people will not talk to

327

00:11:27,509 --> 00:11:26,320

their critics and i can understand if

328

00:11:29,350 --> 00:11:27,519

there's somebody who's actually critical

329

00:11:30,630 --> 00:11:29,360

of the show and wants to provide me with

330

00:11:32,310 --> 00:11:30,640

with feedback

331

00:11:34,230 --> 00:11:32,320

if you're just bashing the show i'm

332

00:11:36,230 --> 00:11:34,240

gonna i'm gonna like my my thing is i'm

333

00:11:38,710 --> 00:11:36,240

just gonna i'm going to read your

334

00:11:39,580 --> 00:11:38,720

comment out on air and i'm going to make

335

00:11:41,509 --> 00:11:39,590

you famous

336

00:11:43,430 --> 00:11:41,519

[Laughter]

337

00:11:44,710 --> 00:11:43,440

um and that's basically it you know if

338

00:11:45,910 --> 00:11:44,720

somebody's just gonna be a troll i'm

339

00:11:48,310 --> 00:11:45,920

gonna read some of it just because it's

340

00:11:50,389 --> 00:11:48,320

hilarious but at the end of the day it's

341

00:11:51,590 --> 00:11:50,399

like yeah like constructive criticism

342

00:11:54,790 --> 00:11:51,600

i'll take and i'll actually incorporate

343

00:11:56,870 --> 00:11:54,800

a lot of it but um

344

00:11:58,069 --> 00:11:56,880

you know that's uh that's how we do

345

00:11:59,670 --> 00:11:58,079

things and i think we actually have

346

00:12:02,310 --> 00:11:59,680

people that you know who are actually in

347

00:12:05,190 --> 00:12:02,320

the channel right now and i'm kind of uh

348

00:12:08,710 --> 00:12:05,200

let's see here there's a kyle held who

349

00:12:11,030 --> 00:12:08,720

is saying he loves the chalice

350

00:12:12,310 --> 00:12:11,040

so he's jealous of scientific truth and

351

00:12:14,949 --> 00:12:12,320

justice there you go and i've got my

352

00:12:18,949 --> 00:12:14,959

i've got my glenn karen to [h\_\_h] you

353

00:12:21,509 --> 00:12:20,389

well it's good to know kyle's out there

354

00:12:23,269 --> 00:12:21,519

he's a great fellow he helped me

355

00:12:24,710 --> 00:12:23,279

technically today at the last moment

356

00:12:27,269 --> 00:12:24,720

well he's probably wondering what the

357

00:12:30,710 --> 00:12:27,279

hell show are you on right now the best

358

00:12:32,629 --> 00:12:30,720

show ever kyle the best show ever

359

00:12:35,269 --> 00:12:32,639

so let's let's get this uh let's get

360

00:12:37,430 --> 00:12:35,279

this this shindig going um now first of

361

00:12:39,670 --> 00:12:37,440

all i need to be able to introduce you

362

00:12:42,710 --> 00:12:39,680

and because you're you're just awesome

363

00:12:44,470 --> 00:12:42,720

so uh as i said george howard is well

364

00:12:46,069 --> 00:12:44,480

i'm gonna read directly from cosmic tusk

365

00:12:47,110 --> 00:12:46,079

because that's one of the i love doing

366

00:12:50,629 --> 00:12:47,120

this

367

00:12:51,350 --> 00:12:50,639

my name is george howard not me him

368

00:12:53,750 --> 00:12:51,360

uh

369

00:12:55,030 --> 00:12:53,760

this guy is george howard right here i

370

00:12:57,430 --> 00:12:55,040

have a young family and a growing

371

00:12:59,509 --> 00:12:57,440

company in raleigh north carolina great

372

00:13:01,110 --> 00:12:59,519

city by the way uh in the united states

373

00:13:03,269 --> 00:13:01,120

of america i also have a twofold

374

00:13:05,190 --> 00:13:03,279

fascination one achieving environmental

375

00:13:06,710 --> 00:13:05,200

quality through the judicious use of

376

00:13:07,829 --> 00:13:06,720

market-based government regulatory

377

00:13:10,389 --> 00:13:07,839

systems

378

00:13:13,190 --> 00:13:10,399

that's awesome and about which i blogs

379

00:13:14,389 --> 00:13:13,200

elsewhere and two all things related to

380

00:13:16,949 --> 00:13:14,399

the developing science of

381

00:13:19,509 --> 00:13:16,959

extraterrestrial impact induced rapid

382

00:13:21,829 --> 00:13:19,519

climate change during the holocene and

383

00:13:24,470 --> 00:13:21,839

slightly before about which i blog here

384

00:13:25,910 --> 00:13:24,480

on cosmictusk.com which you can find in

385

00:13:27,269 --> 00:13:25,920

the show notes

386

00:13:28,949 --> 00:13:27,279

after graduating with the ba in

387

00:13:30,710 --> 00:13:28,959

political science in 1989 from the

388

00:13:33,030 --> 00:13:30,720

university of north carolina i did a

389

00:13:34,870 --> 00:13:33,040

six-year stint in washington dc as a

390

00:13:37,269 --> 00:13:34,880

conservative policy staffer in the

391

00:13:41,030 --> 00:13:37,279

united states senate that is also very

392

00:13:44,389 --> 00:13:41,040

cool i rarely read the bible and i am uh

393

00:13:46,310 --> 00:13:44,399

not a creationist i have however come to

394

00:13:48,870 --> 00:13:46,320

believe that many of the old stories are

395

00:13:50,870 --> 00:13:48,880

true and that we need to heed them i

396

00:13:53,110 --> 00:13:50,880

believe i have believed for more than a

397

00:13:55,269 --> 00:13:53,120

decade that asteroid and comet induced

398

00:13:57,990 --> 00:13:55,279

climate catastrophes have happened over

399

00:14:00,470 --> 00:13:58,000

the last 13 000 years and demand further

400

00:14:02,629 --> 00:14:00,480

investigation and commentary as an issue

401  
00:14:04,629 --> 00:14:02,639  
of public safety not politics or

402  
00:14:08,310 --> 00:14:04,639  
religion i'm a co-author of the

403  
00:14:09,829 --> 00:14:08,320  
firestone at all penis paper of 2007

404  
00:14:11,509 --> 00:14:09,839  
sorry i was off by a year on that one

405  
00:14:13,509 --> 00:14:11,519  
and several other posters

406  
00:14:14,949 --> 00:14:13,519  
my contr contributions consisted largely

407  
00:14:17,269 --> 00:14:14,959  
of field work and analysis of the

408  
00:14:18,790 --> 00:14:17,279  
phenomena known as the carolina bays the

409  
00:14:21,269 --> 00:14:18,800  
carolina bays and other many

410  
00:14:23,590 --> 00:14:21,279  
explanations continue to puzzle me

411  
00:14:25,430 --> 00:14:23,600  
this blog will investigate the carolina

412  
00:14:27,829 --> 00:14:25,440  
bays and other proven and unproven

413  
00:14:30,069 --> 00:14:27,839

impact-related phenomena but it will

414

00:14:31,030 --> 00:14:30,079

focus on the proposed younger drier

415

00:14:33,110 --> 00:14:31,040

event

416

00:14:34,949 --> 00:14:33,120

finally i'm a skeptic i do not take

417

00:14:38,069 --> 00:14:34,959

blogging on weird scientific theories

418

00:14:41,030 --> 00:14:38,079

lightly i don't believe in ufos ghosts

419

00:14:45,350 --> 00:14:42,629

chiropractic it is okay chiropractic

420

00:14:47,110 --> 00:14:45,360

astrology and 2012 apocalypse but i do

421

00:14:49,910 --> 00:14:47,120

believe in the power of blogs to change

422

00:14:52,150 --> 00:14:49,920

things and i think the threat is real

423

00:14:54,310 --> 00:14:52,160

well you have a home here

424

00:14:55,750 --> 00:14:54,320

for open-minded skeptics and again if

425

00:14:57,430 --> 00:14:55,760

you don't believe in ufos that's fine

426

00:14:58,629 --> 00:14:57,440

i've seen some crazy [h\_\_\h] in my time

427

00:15:01,189 --> 00:14:58,639

ghosts

428

00:15:03,670 --> 00:15:01,199

possibility that's fine yeah but we we

429

00:15:05,670 --> 00:15:03,680

believe here in riding the the razor's

430

00:15:08,069 --> 00:15:05,680

edge between open-mindedness and

431

00:15:10,150 --> 00:15:08,079

skepticism to try and and and find that

432

00:15:12,870 --> 00:15:10,160

middle ground to to get to the truth so

433

00:15:15,750 --> 00:15:12,880

you are in good in in good company here

434

00:15:17,030 --> 00:15:15,760

uh mr howard george well i appreciate it

435

00:15:18,710 --> 00:15:17,040

i didn't mean to come off as too much of

436

00:15:21,030 --> 00:15:18,720

a skeptic about anything but my own

437

00:15:23,350 --> 00:15:21,040

subject but i'm open-minded about it all

438

00:15:25,030 --> 00:15:23,360

and i i look it all over and find it all

439

00:15:26,550 --> 00:15:25,040

intriguing and respect those people who

440

00:15:28,870 --> 00:15:26,560

are willing to put out the theories that

441

00:15:30,069 --> 00:15:28,880

uh aren't mainstream accepted yet well

442

00:15:31,509 --> 00:15:30,079

we

443

00:15:33,350 --> 00:15:31,519

you know it it's one of those things

444

00:15:35,750 --> 00:15:33,360

it's like you don't you don't if you're

445

00:15:37,829 --> 00:15:35,760

never going to agree 100 on on something

446

00:15:39,189 --> 00:15:37,839

with anybody uh you'll find something

447

00:15:40,310 --> 00:15:39,199

that you can agree with one thing a

448

00:15:43,269 --> 00:15:40,320

hundred percent on but you're not going

449

00:15:45,110 --> 00:15:43,279

to agree 100 100 on uh like my wife she

450

00:15:47,189 --> 00:15:45,120

loves me to death uh she thinks that the

451

00:15:50,470 --> 00:15:47,199

whole ufo

452

00:15:51,829 --> 00:15:50,480

you know she did her her eyes glaze over

453

00:15:53,030 --> 00:15:51,839

when i start talking about this stuff

454

00:15:55,829 --> 00:15:53,040

and that's that's great she still loves

455

00:15:58,550 --> 00:15:55,839

me to death so you never you don't look

456

00:16:01,430 --> 00:15:58,560

at the what the interests are unless

457

00:16:03,590 --> 00:16:01,440

those interests are illegal or contrary

458

00:16:06,150 --> 00:16:03,600

to the laws of god man

459

00:16:08,629 --> 00:16:06,160

but uh other than that you know

460

00:16:10,790 --> 00:16:08,639

you gotta talk stuff out you can't

461

00:16:12,629 --> 00:16:10,800

expand your own horizons if you don't at

462

00:16:14,389 --> 00:16:12,639

least discuss it or at least consider it

463

00:16:16,470 --> 00:16:14,399

even just a little bit

464

00:16:18,389 --> 00:16:16,480

so there you go and i might add that i

465

00:16:20,629 --> 00:16:18,399

am a believer in extraterrestrial life i

466

00:16:22,629 --> 00:16:20,639

just don't uh i don't accept the craft

467

00:16:24,629 --> 00:16:22,639

yet quote you know or hadn't seen the

468

00:16:26,949 --> 00:16:24,639

convincing evidence i need but i do

469

00:16:29,509 --> 00:16:26,959

believe that extraterrestrial life is uh

470

00:16:30,870 --> 00:16:29,519

uh abundant and indeed omnipotent and

471

00:16:33,189 --> 00:16:30,880

happy to talk about that with you if we

472

00:16:36,069 --> 00:16:33,199

run out of time well we we

473

00:16:37,430 --> 00:16:36,079

we've got until

474

00:16:39,829 --> 00:16:37,440

we got a couple hours so we're good to

475

00:16:41,670 --> 00:16:39,839

go yeah yeah see we'll see where it goes

476

00:16:42,790 --> 00:16:41,680

sure now first first and foremost this

477

00:16:46,870 --> 00:16:42,800

is the first time that i've had this

478

00:16:49,030 --> 00:16:46,880

camera this close and um i'm i know that

479

00:16:51,269 --> 00:16:49,040

if we switch to a

480

00:16:52,470 --> 00:16:51,279

uh screen shared yeah again just let me

481

00:16:54,470 --> 00:16:52,480

know at any point you want to be able to

482

00:16:57,189 --> 00:16:54,480

show any any uh content as we're going

483

00:16:58,310 --> 00:16:57,199

along but first and foremost i want to

484

00:16:59,990 --> 00:16:58,320

understand

485

00:17:02,069 --> 00:17:00,000

where you are coming from with the

486

00:17:04,789 --> 00:17:02,079

carolina bays how did you get involved

487

00:17:06,150 --> 00:17:04,799

in this entire you know this entire

488

00:17:07,590 --> 00:17:06,160

you know

489

00:17:09,270 --> 00:17:07,600

this thing

490

00:17:11,750 --> 00:17:09,280

yeah yeah no no that's what it is it's

491

00:17:13,750 --> 00:17:11,760

kind of multi-faceted uh

492

00:17:16,390 --> 00:17:13,760

set of theories and that's a good place

493

00:17:18,470 --> 00:17:16,400

to start because carolina bays came uh

494

00:17:20,390 --> 00:17:18,480

into my life before the younger driest

495

00:17:21,350 --> 00:17:20,400

impact event about

496

00:17:23,270 --> 00:17:21,360

oh

497

00:17:26,150 --> 00:17:23,280

roughly 10 years before and that would

498

00:17:30,630 --> 00:17:26,160

be 21 years ago

499

00:17:32,310 --> 00:17:30,640

and indeed it was um so it's 1995 96 a

500

00:17:34,549 --> 00:17:32,320

little bit longer than maybe 22 years

501  
00:17:37,029 --> 00:17:34,559  
ago

502  
00:17:38,789 --> 00:17:37,039  
as a as you had said i was working in

503  
00:17:42,630 --> 00:17:38,799  
the u.s senate

504  
00:17:43,830 --> 00:17:42,640  
and uh you know doing uh policy work

505  
00:17:45,590 --> 00:17:43,840  
not particularly political but

506  
00:17:47,190 --> 00:17:45,600  
everything up there is political i

507  
00:17:48,950 --> 00:17:47,200  
thought i'd become a cynic up there this

508  
00:17:52,070 --> 00:17:48,960  
has taught me that i was no near nowhere

509  
00:17:54,150 --> 00:17:52,080  
near the depth of cynicism required

510  
00:17:55,990 --> 00:17:54,160  
but was working in the u.s senate had

511  
00:17:58,150 --> 00:17:56,000  
worked there at the time i guess three

512  
00:17:59,750 --> 00:17:58,160  
or four years started in 1990 right when

513  
00:18:00,950 --> 00:17:59,760

i got out of college

514

00:18:02,950 --> 00:18:00,960

and went up there and kind of went from

515

00:18:04,710 --> 00:18:02,960

the bottom up uh

516

00:18:06,549 --> 00:18:04,720

worked in the mail room and then wrote

517

00:18:08,310 --> 00:18:06,559

letters and kind of helped out with

518

00:18:10,150 --> 00:18:08,320

floor statements and that kind of stuff

519

00:18:11,590 --> 00:18:10,160

and by the time i worked for my second

520

00:18:12,830 --> 00:18:11,600

boss

521

00:18:15,990 --> 00:18:12,840

i was given

522

00:18:17,909 --> 00:18:16,000

a working on environmental policy and we

523

00:18:19,110 --> 00:18:17,919

had a a full subcommittee and that

524

00:18:20,950 --> 00:18:19,120

subcommittee

525

00:18:22,549 --> 00:18:20,960

within its jurisdiction uh something

526

00:18:25,110 --> 00:18:22,559

that i continue to work on to this day

527

00:18:28,390 --> 00:18:25,120

in my um in my work life and that's a

528

00:18:30,070 --> 00:18:28,400

wetlands regulation okay and i promise

529

00:18:31,750 --> 00:18:30,080

this is leading somewhere

530

00:18:34,070 --> 00:18:31,760

um

531

00:18:36,070 --> 00:18:34,080

carolina bays are a wetland

532

00:18:37,909 --> 00:18:36,080

and being the staffer that was working

533

00:18:39,590 --> 00:18:37,919

on reforming wetland regulation at the

534

00:18:41,990 --> 00:18:39,600

time back in the early 90s i would come

535

00:18:43,669 --> 00:18:42,000

across references to various kinds of

536

00:18:46,230 --> 00:18:43,679

wetlands you know you'd see

537

00:18:48,950 --> 00:18:46,240

because in bogs prairie potholes

538

00:18:49,990 --> 00:18:48,960

bottomland hardwoods winter wet woods

539

00:18:51,750 --> 00:18:50,000

you know

540

00:18:53,590 --> 00:18:51,760

marsh all these kinds of

541

00:18:56,549 --> 00:18:53,600

50 60 different kinds of wetlands and

542

00:18:58,549 --> 00:18:56,559

they occasionally see carolina bay

543

00:18:59,990 --> 00:18:58,559

it always catch my eye

544

00:19:01,590 --> 00:19:00,000

and never really had a chance to look

545

00:19:03,350 --> 00:19:01,600

into it but i thought it's so odd

546

00:19:05,590 --> 00:19:03,360

because first of all my boss was from

547

00:19:07,270 --> 00:19:05,600

north carolina i had no idea what the

548

00:19:09,830 --> 00:19:07,280

reference wasn't like well a bay

549

00:19:11,590 --> 00:19:09,840

certainly isn't a wetland a bay is a

550

00:19:13,350 --> 00:19:11,600

embayment you know is a niche in the

551  
00:19:15,350 --> 00:19:13,360  
coast that we call a bay and that's you

552  
00:19:18,390 --> 00:19:15,360  
know marine and oceanic and not shallow

553  
00:19:19,510 --> 00:19:18,400  
and not a wetland i wonder what it is

554  
00:19:20,549 --> 00:19:19,520  
and

555  
00:19:22,630 --> 00:19:20,559  
it was ant

556  
00:19:24,150 --> 00:19:22,640  
answered for me in this way i was with

557  
00:19:26,150 --> 00:19:24,160  
the boss the u.s senator if i remember

558  
00:19:29,590 --> 00:19:26,160  
correctly it was just me and him and he

559  
00:19:32,230 --> 00:19:29,600  
actually uh asked he said hey get me a

560  
00:19:34,549 --> 00:19:32,240  
a map of my farm he was a very large

561  
00:19:36,070 --> 00:19:34,559  
landowner in north carolina

562  
00:19:37,909 --> 00:19:36,080  
and uh

563  
00:19:39,430 --> 00:19:37,919

owned literally tens of thousands of

564

00:19:41,430 --> 00:19:39,440

acres and had one concentration of

565

00:19:43,110 --> 00:19:41,440

property in his uh home county actually

566

00:19:44,470 --> 00:19:43,120

where kyle held who was on here a little

567

00:19:46,549 --> 00:19:44,480

while ago is from

568

00:19:49,909 --> 00:19:46,559

from clinton north carolina

569

00:19:52,150 --> 00:19:49,919

um in sampson county and he said get a

570

00:19:53,590 --> 00:19:52,160

map of my farm and he's a good old

571

00:19:55,430 --> 00:19:53,600

southern boy you know the you know

572

00:19:57,350 --> 00:19:55,440

classic type politicians that are dying

573

00:19:58,710 --> 00:19:57,360

out he was a former democrat turned

574

00:20:01,430 --> 00:19:58,720

republican

575

00:20:03,430 --> 00:20:01,440

and he said get me a map of my farm

576

00:20:04,390 --> 00:20:03,440

and get me a quad sheet and he knew what

577

00:20:07,510 --> 00:20:04,400

they were and i said yeah i know it

578

00:20:08,950 --> 00:20:07,520

acquired that what the usgs puts out

579

00:20:10,150 --> 00:20:08,960

and i said yeah i'll get you one so i

580

00:20:11,669 --> 00:20:10,160

got on and called the congressional

581

00:20:13,350 --> 00:20:11,679

liaison with the united states

582

00:20:15,430 --> 00:20:13,360

geological survey and i said could you

583

00:20:16,710 --> 00:20:15,440

all deliver me uh quad sheet number

584

00:20:18,310 --> 00:20:16,720

seven of

585

00:20:20,789 --> 00:20:18,320

sampson county north carolina or

586

00:20:22,230 --> 00:20:20,799

whatever the designation was and uh you

587

00:20:23,669 --> 00:20:22,240

know how they kind of hop to down there

588

00:20:26,150 --> 00:20:23,679

it's easy to get those kinds of things

589

00:20:28,470 --> 00:20:26,160

done in washington and i bet it was that

590

00:20:30,789 --> 00:20:28,480

afternoon if uh if i remember correctly

591

00:20:33,350 --> 00:20:30,799

they sent a courier over with a quad

592

00:20:34,710 --> 00:20:33,360

sheet of the boss's farm

593

00:20:36,710 --> 00:20:34,720

or at least the area in which one of

594

00:20:38,470 --> 00:20:36,720

these large tracks was contained in

595

00:20:39,990 --> 00:20:38,480

rolled it out

596

00:20:42,310 --> 00:20:40,000

and he was looking at it saying yeah

597

00:20:44,310 --> 00:20:42,320

here my wetlands here's how my farm

598

00:20:45,669 --> 00:20:44,320

works and this and that and he loved

599

00:20:47,990 --> 00:20:45,679

this kind of stuff this was his kind of

600

00:20:51,110 --> 00:20:48,000

thing and going all over and i looked

601  
00:20:53,110 --> 00:20:51,120  
down and i saw dozens

602  
00:20:55,590 --> 00:20:53,120  
probably been on a quad sheet not more

603  
00:20:56,710 --> 00:20:55,600  
than say a couple of dozen

604  
00:20:58,549 --> 00:20:56,720  
um

605  
00:21:02,950 --> 00:20:58,559  
dotted green

606  
00:21:05,430 --> 00:21:02,960  
oval lines elliptical lines i should say

607  
00:21:07,750 --> 00:21:05,440  
ellipses dotted green lines

608  
00:21:09,590 --> 00:21:07,760  
all over his form and i said well what

609  
00:21:13,669 --> 00:21:09,600  
on earth is that boss

610  
00:21:17,430 --> 00:21:15,669  
was he joking or was he serious well

611  
00:21:19,909 --> 00:21:17,440  
that's what i said i said you know

612  
00:21:21,350 --> 00:21:19,919  
excuse me and i was been a science geek

613  
00:21:22,710 --> 00:21:21,360

since i was a kid you know i'm into

614

00:21:23,750 --> 00:21:22,720

politics here but i guess one of the

615

00:21:25,110 --> 00:21:23,760

reasons i was able to do the wetland

616

00:21:26,710 --> 00:21:25,120

stuff was that's kind of fairly

617

00:21:29,029 --> 00:21:26,720

scientifically literate

618

00:21:31,430 --> 00:21:29,039

and i said what do you mean meteor holes

619

00:21:34,230 --> 00:21:31,440

first i'll say do you mean craters

620

00:21:36,870 --> 00:21:34,240

there's never been a a a

621

00:21:39,430 --> 00:21:36,880

any note of a extraterrestrial crater in

622

00:21:42,390 --> 00:21:39,440

north carolina mr sander faircloth and

623

00:21:45,110 --> 00:21:42,400

he said oh no no no no no they're

624

00:21:46,789 --> 00:21:45,120

everywhere down there and i said i had

625

00:21:49,750 --> 00:21:46,799

never heard of such thing as he goes oh

626

00:21:52,789 --> 00:21:49,760

yeah they call them carolina bays

627

00:21:53,990 --> 00:21:52,799

and i said no kidding that's what that

628

00:21:55,669 --> 00:21:54,000

means

629

00:21:57,590 --> 00:21:55,679

and he said oh yeah yeah yeah it's a

630

00:21:59,350 --> 00:21:57,600

wetland everyone owns a wetland

631

00:22:01,350 --> 00:21:59,360

he said and i got him all over my place

632

00:22:04,950 --> 00:22:01,360

everybody else does he said now when i

633

00:22:06,950 --> 00:22:04,960

was a boy it was the biggest thing ever

634

00:22:09,110 --> 00:22:06,960

and i said what do you mean

635

00:22:11,990 --> 00:22:09,120

and he said well you know and he was

636

00:22:13,909 --> 00:22:12,000

born in the 20s he said 1930s you know

637

00:22:15,830 --> 00:22:13,919

it was it was just all over the

638

00:22:17,669 --> 00:22:15,840

newspapers and everybody's all excited

639

00:22:19,190 --> 00:22:17,679

about it that we had been hit from stuff

640

00:22:21,350 --> 00:22:19,200

from space

641

00:22:22,870 --> 00:22:21,360

right down here in sampson county

642

00:22:25,110 --> 00:22:22,880

or down there in sampson county and i

643

00:22:26,470 --> 00:22:25,120

said you've got to be kidding me and i

644

00:22:27,990 --> 00:22:26,480

kind of was a student of the state

645

00:22:30,310 --> 00:22:28,000

obviously working up there for you know

646

00:22:31,590 --> 00:22:30,320

senior politicians of my state dearly

647

00:22:32,870 --> 00:22:31,600

and then thought i understood it pretty

648

00:22:35,669 --> 00:22:32,880

well and he said

649

00:22:37,430 --> 00:22:35,679

um yeah yeah yeah it was big time so of

650

00:22:38,950 --> 00:22:37,440

course i i said i gotta look this up and

651  
00:22:40,710 --> 00:22:38,960  
that was right about the time the

652  
00:22:41,990 --> 00:22:40,720  
internet was getting going

653  
00:22:43,750 --> 00:22:42,000  
i was actually one of the first people

654  
00:22:44,870 --> 00:22:43,760  
in the senate to have the internet other

655  
00:22:46,870 --> 00:22:44,880  
than the text

656  
00:22:49,510 --> 00:22:46,880  
and i got on there and called up the web

657  
00:22:51,029 --> 00:22:49,520  
page dialed it in and it started a a

658  
00:22:53,190 --> 00:22:51,039  
friendship to this day with a fellow

659  
00:22:55,190 --> 00:22:53,200  
down in georgia named bob cobras

660  
00:22:57,990 --> 00:22:55,200  
who was the librarian the digital

661  
00:23:00,230 --> 00:22:58,000  
librarian um actually for the university

662  
00:23:02,630 --> 00:23:00,240  
of georgia down in athens georgia

663  
00:23:05,590 --> 00:23:02,640

and at that time and it is still up and

664

00:23:07,990 --> 00:23:05,600

it's pretty much in its same form um

665

00:23:09,909 --> 00:23:08,000

he put up a page on carolina bay's and

666

00:23:11,909 --> 00:23:09,919

that was early internet he had had that

667

00:23:14,549 --> 00:23:11,919

up maybe 93-94

668

00:23:16,950 --> 00:23:14,559

again this time 95 or so

669

00:23:19,350 --> 00:23:16,960

and i looked it over and i said i will

670

00:23:20,470 --> 00:23:19,360

be darned these things are absolutely

671

00:23:23,350 --> 00:23:20,480

everywhere

672

00:23:25,830 --> 00:23:23,360

people have been saying since the 1930s

673

00:23:27,830 --> 00:23:25,840

that they were impact features and i'm

674

00:23:30,149 --> 00:23:27,840

going to learn up on it

675

00:23:32,310 --> 00:23:30,159

so uh

676

00:23:33,830 --> 00:23:32,320

i did to some extent certainly didn't

677

00:23:35,350 --> 00:23:33,840

write anything down didn't have a blog

678

00:23:37,029 --> 00:23:35,360

or anything like that but but kind of

679

00:23:37,909 --> 00:23:37,039

consumed what i could

680

00:23:39,990 --> 00:23:37,919

and

681

00:23:41,270 --> 00:23:40,000

i took a job not long after i got out of

682

00:23:42,630 --> 00:23:41,280

there i've been there six years didn't

683

00:23:44,070 --> 00:23:42,640

want to be a lobbyist couldn't be a

684

00:23:46,710 --> 00:23:44,080

lawyer probably

685

00:23:48,710 --> 00:23:46,720

and moved home to be a wetland

686

00:23:50,630 --> 00:23:48,720

mitigation banker happy to explain that

687

00:23:51,750 --> 00:23:50,640

if we truly run out of time

688

00:23:53,430 --> 00:23:51,760

and

689

00:23:55,430 --> 00:23:53,440

uh

690

00:23:57,909 --> 00:23:55,440

moved down here and was actually told to

691

00:24:00,710 --> 00:23:57,919

go out and buy some land

692

00:24:02,310 --> 00:24:00,720

and the very first piece of land that i

693

00:24:04,470 --> 00:24:02,320

got in touch with to purchase for this

694

00:24:06,390 --> 00:24:04,480

company i looked down at the sheet when

695

00:24:09,350 --> 00:24:06,400

i first saw the map of it and i said i

696

00:24:11,269 --> 00:24:09,360

will be darn i am just thrilled uh it's

697

00:24:12,630 --> 00:24:11,279

carolina bay

698

00:24:14,630 --> 00:24:12,640

so i was like i got i'm gonna actually

699

00:24:17,430 --> 00:24:14,640

go out and see one

700

00:24:19,590 --> 00:24:17,440

and went out and it's actually a very

701  
00:24:20,789 --> 00:24:19,600  
interesting one happy to show you uh uh

702  
00:24:22,549 --> 00:24:20,799  
where it is on google earth and we'll

703  
00:24:24,549 --> 00:24:22,559  
take a look at it on google earth later

704  
00:24:28,390 --> 00:24:24,559  
if you like fantastic and

705  
00:24:30,310 --> 00:24:28,400  
yeah and and i became very very up close

706  
00:24:32,230 --> 00:24:30,320  
and friendly with them from then on and

707  
00:24:34,630 --> 00:24:32,240  
we've continued to work with them in

708  
00:24:36,070 --> 00:24:34,640  
wetland restoration to this day

709  
00:24:37,430 --> 00:24:36,080  
um

710  
00:24:39,590 --> 00:24:37,440  
and then

711  
00:24:41,110 --> 00:24:39,600  
as i accumulated more knowledge and

712  
00:24:42,789 --> 00:24:41,120  
probably could shut up about it with

713  
00:24:44,710 --> 00:24:42,799

friends i said you know just telling

714

00:24:46,310 --> 00:24:44,720

people most of me didn't care that there

715

00:24:48,390 --> 00:24:46,320

was this strange phenomenon in north

716

00:24:50,230 --> 00:24:48,400

carolina's geology that i didn't know

717

00:24:51,830 --> 00:24:50,240

anybody that was aware of and people you

718

00:24:53,269 --> 00:24:51,840

know generally interested in it but they

719

00:24:54,630 --> 00:24:53,279

all knew that i was kind of a fanatic

720

00:24:58,310 --> 00:24:54,640

about it at the time

721

00:25:00,549 --> 00:24:58,320

and a buddy of mine asked me

722

00:25:02,149 --> 00:25:00,559

uh he had come back to college this was

723

00:25:03,590 --> 00:25:02,159

some years after we had already

724

00:25:05,590 --> 00:25:03,600

graduated

725

00:25:07,909 --> 00:25:05,600

and he was going back to finish up his

726

00:25:09,510 --> 00:25:07,919

degree and he just needed a few classes

727

00:25:11,269 --> 00:25:09,520

and one of them he was taking was

728

00:25:13,990 --> 00:25:11,279

geology class

729

00:25:15,750 --> 00:25:14,000

and he said uh hey buddy george will you

730

00:25:18,310 --> 00:25:15,760

uh uh

731

00:25:19,830 --> 00:25:18,320

write me some notes because uh they've

732

00:25:21,510 --> 00:25:19,840

one of the papers we can have in this

733

00:25:23,110 --> 00:25:21,520

class concerns carolina bays and you

734

00:25:24,549 --> 00:25:23,120

can't shut up about them

735

00:25:26,310 --> 00:25:24,559

and uh

736

00:25:27,430 --> 00:25:26,320

will you dash me out some notes you know

737

00:25:28,630 --> 00:25:27,440

asking me to write a little something

738

00:25:30,310 --> 00:25:28,640

for him

739

00:25:33,029 --> 00:25:30,320

because i got this paper coming up well

740

00:25:35,430 --> 00:25:33,039

27 pages later

741

00:25:37,909 --> 00:25:35,440

uh i handed him over a little essay i

742

00:25:39,269 --> 00:25:37,919

wrote and i think he got like a b plus

743

00:25:41,350 --> 00:25:39,279

or something like that he's very

744

00:25:42,710 --> 00:25:41,360

appreciative and i certainly hope he

745

00:25:44,149 --> 00:25:42,720

didn't turn it in

746

00:25:46,549 --> 00:25:44,159

in the form that i gave it to him but

747

00:25:49,269 --> 00:25:46,559

that's his responsibility if so

748

00:25:50,470 --> 00:25:49,279

and i took that uh essay that was right

749

00:25:52,230 --> 00:25:50,480

around when people were starting to put

750

00:25:54,230 --> 00:25:52,240

up their own web pages and i bought

751

00:25:55,990 --> 00:25:54,240

georgehoward.net

752

00:25:58,149 --> 00:25:56,000

which is just a hurting website out

753

00:26:00,230 --> 00:25:58,159

there now can continuing to disintegrate

754

00:26:01,990 --> 00:26:00,240

and fall apart and i i gotta stick a

755

00:26:03,350 --> 00:26:02,000

knife in it at some point

756

00:26:04,950 --> 00:26:03,360

and the very first time i said well what

757

00:26:07,750 --> 00:26:04,960

am i gonna put on this thing i said well

758

00:26:10,789 --> 00:26:07,760

shoot i got that carolina bay paper

759

00:26:12,630 --> 00:26:10,799

so i hoisted it up there and it got a

760

00:26:13,669 --> 00:26:12,640

privileged position in rankings ever

761

00:26:15,590 --> 00:26:13,679

since

762

00:26:17,590 --> 00:26:15,600

that it was one of the first mentions of

763

00:26:19,750 --> 00:26:17,600

other bob's pages of the phenomenon and

764

00:26:20,549 --> 00:26:19,760

it was a fairly detailed discussion of

765

00:26:24,230 --> 00:26:20,559

it

766

00:26:26,630 --> 00:26:24,240

i started getting emails from people

767

00:26:27,990 --> 00:26:26,640

from time to time

768

00:26:29,590 --> 00:26:28,000

and this is when it starts switching

769

00:26:31,430 --> 00:26:29,600

over into the younger giants part if you

770

00:26:33,590 --> 00:26:31,440

want me to uh go ahead and transition

771

00:26:35,190 --> 00:26:33,600

into there that was about 98.99 when i

772

00:26:37,750 --> 00:26:35,200

put that paper up maybe it actually

773

00:26:38,870 --> 00:26:37,760

wrote it in 97 so it could be that early

774

00:26:40,470 --> 00:26:38,880

honestly like

775

00:26:42,070 --> 00:26:40,480

keep going because i don't think a lot

776

00:26:44,789 --> 00:26:42,080

of people have actually heard

777

00:26:45,669 --> 00:26:44,799

this side of the discovery the discovery

778

00:26:47,909 --> 00:26:45,679

phase

779

00:26:49,190 --> 00:26:47,919

yeah yeah yeah this is the earliest part

780

00:26:51,350 --> 00:26:49,200

of the yd

781

00:26:53,430 --> 00:26:51,360

science here or at least my uh my

782

00:26:55,830 --> 00:26:53,440

involvement with it and frankly it goes

783

00:26:57,590 --> 00:26:55,840

back to plato or before but at least the

784

00:27:00,789 --> 00:26:57,600

modern iteration

785

00:27:01,669 --> 00:27:00,799

so the paper was up there

786

00:27:03,590 --> 00:27:01,679

and

787

00:27:05,350 --> 00:27:03,600

one day i get an email

788

00:27:08,149 --> 00:27:05,360

i had gotten a couple of emails from his

789

00:27:09,590 --> 00:27:08,159

compatriot that he had not uh i didn't

790

00:27:11,110 --> 00:27:09,600

really pay a lot of attention to him

791

00:27:13,269 --> 00:27:11,120

he's a fairly

792

00:27:15,110 --> 00:27:13,279

uh i don't know it's just

793

00:27:16,149 --> 00:27:15,120

one spam but it was kind of it was out

794

00:27:17,110 --> 00:27:16,159

there and i wasn't paying a lot of

795

00:27:18,390 --> 00:27:17,120

attention to it probably should have

796

00:27:19,669 --> 00:27:18,400

paid more for a fellow named william

797

00:27:22,470 --> 00:27:19,679

topping

798

00:27:24,310 --> 00:27:22,480

back

799

00:27:25,990 --> 00:27:24,320

the modern dna of this first people to

800

00:27:28,070 --> 00:27:26,000

broke per person to bring this stuff up

801  
00:27:29,750 --> 00:27:28,080  
and try to get it published but then one

802  
00:27:30,789 --> 00:27:29,760  
day not long after i started to hear

803  
00:27:33,029 --> 00:27:30,799  
from toffee and had a little bit of

804  
00:27:36,870 --> 00:27:33,039  
sketch with him i got an email from

805  
00:27:39,110 --> 00:27:36,880  
uh dr richard firestone

806  
00:27:41,909 --> 00:27:39,120  
i said well that's a hell of a name and

807  
00:27:43,750 --> 00:27:41,919  
from his address was one cyclic tron

808  
00:27:46,230 --> 00:27:43,760  
drive

809  
00:27:49,190 --> 00:27:46,240  
berkeley california

810  
00:27:51,029 --> 00:27:49,200  
at lawrence uh berkeley national nuclear

811  
00:27:53,029 --> 00:27:51,039  
laboratory

812  
00:27:55,590 --> 00:27:53,039  
and i said well i'll be damned he said i

813  
00:27:57,190 --> 00:27:55,600

am associate and uh co-researcher with

814

00:27:58,789 --> 00:27:57,200

william topping

815

00:28:00,630 --> 00:27:58,799

and we

816

00:28:04,230 --> 00:28:00,640

discovered as william might have said

817

00:28:05,590 --> 00:28:04,240

that um we have evidence

818

00:28:08,710 --> 00:28:05,600

that we are collecting that william

819

00:28:11,430 --> 00:28:08,720

initiated that shows some uh

820

00:28:14,549 --> 00:28:11,440

anomalous uh soils

821

00:28:16,389 --> 00:28:14,559

13 000 years ago in the upper midwest at

822

00:28:19,510 --> 00:28:16,399

archaeological sites

823

00:28:21,669 --> 00:28:19,520

and we are uh i'm testing them for uh

824

00:28:23,029 --> 00:28:21,679

topping out here and we're finding some

825

00:28:25,590 --> 00:28:23,039

odd stuff

826  
00:28:28,310 --> 00:28:25,600  
and we were googling around or whatever

827  
00:28:30,630 --> 00:28:28,320  
we were doing back then uh uh

828  
00:28:31,590 --> 00:28:30,640  
alta vista or whatever it was

829  
00:28:34,070 --> 00:28:31,600  
and

830  
00:28:36,310 --> 00:28:34,080  
for the terms related to explosion

831  
00:28:37,430 --> 00:28:36,320  
catastrophe you know big bang over the

832  
00:28:40,789 --> 00:28:37,440  
midwest

833  
00:28:42,230 --> 00:28:40,799  
and they had stumbled upon the paper

834  
00:28:43,750 --> 00:28:42,240  
now i probably should have said before i

835  
00:28:45,590 --> 00:28:43,760  
guess i did that senator faircloth had

836  
00:28:48,710 --> 00:28:45,600  
told me and this was part of the record

837  
00:28:51,750 --> 00:28:48,720  
that since the 1930s people had been

838  
00:28:53,510 --> 00:28:51,760

claiming that something had exploded

839

00:28:56,149 --> 00:28:53,520

and or

840

00:28:57,909 --> 00:28:56,159

impacted and it had become known that it

841

00:28:59,669 --> 00:28:57,919

pointed to the midwest and they were

842

00:29:01,630 --> 00:28:59,679

searching for explosion of the midwest

843

00:29:04,230 --> 00:29:01,640

so it's kind of one of those interesting

844

00:29:05,510 --> 00:29:04,240

cerebritis and also

845

00:29:07,269 --> 00:29:05,520

you know kind of indicative that there

846

00:29:09,190 --> 00:29:07,279

might be something to it where they were

847

00:29:11,669 --> 00:29:09,200

onto a completely different line of

848

00:29:12,710 --> 00:29:11,679

evidence just searching terms related to

849

00:29:14,549 --> 00:29:12,720

the catastrophe that they were

850

00:29:17,190 --> 00:29:14,559

describing with the carolina bays

851  
00:29:18,870 --> 00:29:17,200  
happened upon the carolina bays

852  
00:29:20,870 --> 00:29:18,880  
and not only did they seem to be related

853  
00:29:23,990 --> 00:29:20,880  
to it but it pointed they point to the

854  
00:29:25,750 --> 00:29:24,000  
area with which they were concerned

855  
00:29:28,870 --> 00:29:25,760  
well to be to be honest uh the first

856  
00:29:30,549 --> 00:29:28,880  
time i i'd heard about the carolina bays

857  
00:29:32,549 --> 00:29:30,559  
and i'd looked into the the phenomenon

858  
00:29:34,070 --> 00:29:32,559  
myself and and this was i think around

859  
00:29:35,750 --> 00:29:34,080  
the around the time that i'd first

860  
00:29:37,190 --> 00:29:35,760  
started looking into the young dry

861  
00:29:40,230 --> 00:29:37,200  
impact hypothesis and this might have

862  
00:29:41,830 --> 00:29:40,240  
been around 2014

863  
00:29:45,350 --> 00:29:41,840

2015

864

00:29:47,029 --> 00:29:45,360

and i saw the the top the the topography

865

00:29:48,389 --> 00:29:47,039

on google earth

866

00:29:50,310 --> 00:29:48,399

and the way that they were all shaped

867

00:29:52,230 --> 00:29:50,320

i'm like yeah that that's that looks

868

00:29:53,830 --> 00:29:52,240

like uh you know like to me it looks

869

00:29:55,510 --> 00:29:53,840

like shrapnel like it looks like it

870

00:29:56,870 --> 00:29:55,520

looks like somebody took buckshot

871

00:29:58,230 --> 00:29:56,880

basically pointed it you know pointed

872

00:29:59,669 --> 00:29:58,240

something at the ground and you know

873

00:30:04,389 --> 00:29:59,679

just unloaded

874

00:30:06,230 --> 00:30:04,399

and that like that is the type of

875

00:30:07,430 --> 00:30:06,240

the type of impact that you get from

876  
00:30:08,549 --> 00:30:07,440  
that

877  
00:30:11,669 --> 00:30:08,559  
yeah

878  
00:30:13,669 --> 00:30:11,679  
shrapnel blood spatter patterns

879  
00:30:15,190 --> 00:30:13,679  
explosion of uh

880  
00:30:16,389 --> 00:30:15,200  
rain drops on your windshield when

881  
00:30:17,909 --> 00:30:16,399  
you're going really fast and what they

882  
00:30:20,630 --> 00:30:17,919  
look like

883  
00:30:22,870 --> 00:30:20,640  
that it suggests that there was a one

884  
00:30:24,789 --> 00:30:22,880  
large simultaneous action that produced

885  
00:30:26,310 --> 00:30:24,799  
them and that continues to be debated to

886  
00:30:27,990 --> 00:30:26,320  
this day

887  
00:30:29,510 --> 00:30:28,000  
um so i got in touch with firestone he

888  
00:30:30,789 --> 00:30:29,520

said you know uh we'd like to stay in

889

00:30:31,990 --> 00:30:30,799

touch with you anything you hear down

890

00:30:35,590 --> 00:30:32,000

there etc and so forth and they

891

00:30:37,110 --> 00:30:35,600

published a paper in 2001 or 2002 in the

892

00:30:39,029 --> 00:30:37,120

small journal but respected journal

893

00:30:41,190 --> 00:30:39,039

called the mammoth trumpet and they made

894

00:30:43,990 --> 00:30:41,200

the absolutely astonishing claim that

895

00:30:45,430 --> 00:30:44,000

there was a tremendous catastrophe um

896

00:30:48,310 --> 00:30:45,440

somewhere centered around the great

897

00:30:50,789 --> 00:30:48,320

lakes uh 12 900 years ago and that there

898

00:30:52,870 --> 00:30:50,799

was evidence of it in a uh at that time

899

00:30:54,470 --> 00:30:52,880

fairly small number of proxies and

900

00:30:55,750 --> 00:30:54,480

actually some proxies that were probably

901  
00:30:58,470 --> 00:30:55,760  
false they might have been seeing some

902  
00:31:00,470 --> 00:30:58,480  
things not firestone but but topping he

903  
00:31:02,149 --> 00:31:00,480  
was finding tracks in chert and i don't

904  
00:31:04,070 --> 00:31:02,159  
think we've ever we didn't continue that

905  
00:31:06,070 --> 00:31:04,080  
evidences other outlines of evidence

906  
00:31:07,190 --> 00:31:06,080  
that we were confident in early on some

907  
00:31:08,389 --> 00:31:07,200  
of those have

908  
00:31:09,750 --> 00:31:08,399  
have um

909  
00:31:10,789 --> 00:31:09,760  
you know gone into the background

910  
00:31:11,590 --> 00:31:10,799  
because you gotta sort through this

911  
00:31:14,070 --> 00:31:11,600  
stuff

912  
00:31:15,350 --> 00:31:14,080  
but uh they published a paper in 2001 in

913  
00:31:16,950 --> 00:31:15,360

the mammoth trumpet saying that there

914

00:31:18,230 --> 00:31:16,960

was a tremendous catastrophe above the

915

00:31:19,909 --> 00:31:18,240

uh nor

916

00:31:22,549 --> 00:31:19,919

above the great lakes and it had some

917

00:31:25,350 --> 00:31:22,559

flaws in it from our perspective and it

918

00:31:27,710 --> 00:31:25,360

received uh some criticism and he was

919

00:31:30,630 --> 00:31:27,720

focused at that time as a uh

920

00:31:32,710 --> 00:31:30,640

radionucleotide uh scientist is he's the

921

00:31:33,990 --> 00:31:32,720

you know uh actually

922

00:31:37,029 --> 00:31:34,000

wrote

923

00:31:38,710 --> 00:31:37,039

authored the encyclopedia of isotopes dr

924

00:31:39,909 --> 00:31:38,720

firestone did you know which is one of

925

00:31:42,149 --> 00:31:39,919

those thousand

926

00:31:43,669 --> 00:31:42,159

dollar you know eight volume

927

00:31:44,950 --> 00:31:43,679

foot long

928

00:31:48,470 --> 00:31:44,960

uh uh

929

00:31:50,950 --> 00:31:48,480

indexes of scientific information and

930

00:31:53,590 --> 00:31:50,960

he's obviously was concentrated on on

931

00:31:55,509 --> 00:31:53,600

you know uh uh cosmic particles and

932

00:31:56,870 --> 00:31:55,519

radiation and that kind of stuff

933

00:31:59,269 --> 00:31:56,880

and that's what he thought had happened

934

00:32:01,750 --> 00:31:59,279

that there had been a a blast in

935

00:32:03,990 --> 00:32:01,760

uh firestone still can believes that in

936

00:32:05,830 --> 00:32:04,000

his his personal he leans more to

937

00:32:07,750 --> 00:32:05,840

something like supernova and we continue

938

00:32:09,669 --> 00:32:07,760

to be painted with that which is just

939

00:32:12,870 --> 00:32:09,679

fine because richard may well be right

940

00:32:15,029 --> 00:32:12,880

but we have long reoriented the theory

941

00:32:16,789 --> 00:32:15,039

to something a little more tangible than

942

00:32:18,549 --> 00:32:16,799

that being a comet or asteroid impact

943

00:32:20,149 --> 00:32:18,559

particularly comet

944

00:32:22,710 --> 00:32:20,159

and and

945

00:32:24,549 --> 00:32:22,720

yeah well before the card like i i've

946

00:32:26,870 --> 00:32:24,559

heard several theories myself i've heard

947

00:32:29,350 --> 00:32:26,880

of the the the supernova star remnant

948

00:32:31,110 --> 00:32:29,360

which which uh is one that

949

00:32:33,590 --> 00:32:31,120

um is

950

00:32:35,669 --> 00:32:33,600

uh i believe one researcher gary david

951  
00:32:38,870 --> 00:32:35,679  
who whom uh we've got coming up in in

952  
00:32:40,389 --> 00:32:38,880  
september uh is proponent of that theory

953  
00:32:43,269 --> 00:32:40,399  
uh there's also the coronal mass

954  
00:32:45,830 --> 00:32:43,279  
ejection theory which is supported by um

955  
00:32:47,990 --> 00:32:45,840  
researchers such as uh dr robert shock

956  
00:32:49,909 --> 00:32:48,000  
from boston university uh geological

957  
00:32:53,350 --> 00:32:49,919  
department lavalette in that way paul

958  
00:32:54,470 --> 00:32:53,360  
lavala and then you've got again um

959  
00:32:57,190 --> 00:32:54,480  
individuals such as yourself and

960  
00:33:00,470 --> 00:32:57,200  
researchers such as firestone and uh jim

961  
00:33:01,830 --> 00:33:00,480  
kennett uh who you know will

962  
00:33:03,990 --> 00:33:01,840  
are are more towards the the

963  
00:33:06,549 --> 00:33:04,000

extraterrestrial impact uh from either a

964

00:33:07,830 --> 00:33:06,559

bolt like some type of bolide

965

00:33:10,310 --> 00:33:07,840

and

966

00:33:12,070 --> 00:33:10,320

so you know there there are prevalent

967

00:33:14,310 --> 00:33:12,080

theories the

968

00:33:17,430 --> 00:33:14,320

main aspect is

969

00:33:19,669 --> 00:33:17,440

what's actually found within these areas

970

00:33:21,350 --> 00:33:19,679

um you know at least as far as as far as

971

00:33:25,029 --> 00:33:21,360

within north america like the the the

972

00:33:29,190 --> 00:33:27,110

from what i've been able to at least

973

00:33:31,990 --> 00:33:29,200

discern from papers from yourself and

974

00:33:33,950 --> 00:33:32,000

and from from others is that the

975

00:33:36,389 --> 00:33:33,960

you know the presence of

976  
00:33:39,029 --> 00:33:36,399  
microspherules which is always a word

977  
00:33:40,070 --> 00:33:39,039  
that i have a hard time pronouncing

978  
00:33:41,909 --> 00:33:40,080  
in platinum

979  
00:33:43,909 --> 00:33:41,919  
and and platinum-based metals

980  
00:33:45,269 --> 00:33:43,919  
leads more towards the idea that it is

981  
00:33:47,509 --> 00:33:45,279  
an extraterrestrial impact and not

982  
00:33:50,710 --> 00:33:47,519  
necessarily chrono-mass ejection

983  
00:33:53,029 --> 00:33:50,720  
so but the the fact that that these

984  
00:33:55,029 --> 00:33:53,039  
um you know these characteristics which

985  
00:33:56,470 --> 00:33:55,039  
which are found in varying levels and in

986  
00:33:58,149 --> 00:33:56,480  
different areas

987  
00:33:59,990 --> 00:33:58,159  
again they do vary and that's one of the

988  
00:34:01,830 --> 00:34:00,000

reasons why there is

989

00:34:04,830 --> 00:34:01,840

you know this contention between

990

00:34:07,190 --> 00:34:04,840

uh one uh event happening over

991

00:34:09,669 --> 00:34:07,200

another that's right i wouldn't even put

992

00:34:11,270 --> 00:34:09,679

it contention you know at least not too

993

00:34:13,190 --> 00:34:11,280

strongly i know that shock's not a big

994

00:34:15,109 --> 00:34:13,200

fan of ours um

995

00:34:16,950 --> 00:34:15,119

but i know firestone obviously doesn't

996

00:34:19,190 --> 00:34:16,960

you know hold any grudge that the the

997

00:34:20,869 --> 00:34:19,200

current publications veer away from his

998

00:34:23,829 --> 00:34:20,879

favorite hypothesis

999

00:34:26,470 --> 00:34:23,839

um i mean we're we're

1000

00:34:28,069 --> 00:34:26,480

this is uh all out of the mainstream and

1001

00:34:29,510 --> 00:34:28,079

i certainly keep an open mind towards

1002

00:34:30,950 --> 00:34:29,520

all of it and frankly it could have been

1003

00:34:32,710 --> 00:34:30,960

a combination of them what we're talking

1004

00:34:36,069 --> 00:34:32,720

about at least on our side is the

1005

00:34:37,829 --> 00:34:36,079

progressive disintegration of a

1006

00:34:39,990 --> 00:34:37,839

rather large comet that entered the

1007

00:34:41,349 --> 00:34:40,000

solar system some 30 000 years ago and

1008

00:34:42,950 --> 00:34:41,359

there could have been a number of events

1009

00:34:45,829 --> 00:34:42,960

and in fact there could have been you

1010

00:34:49,349 --> 00:34:45,839

know events that involve the sun as well

1011

00:34:51,270 --> 00:34:49,359

and uh uh that's not entered into the

1012

00:34:53,909 --> 00:34:51,280

you know into the published research yet

1013

00:34:55,669 --> 00:34:53,919

but uh there's everything's on the table

1014

00:34:57,750 --> 00:34:55,679

on our side we just need to sort through

1015

00:35:00,470 --> 00:34:57,760

it and see what's most verifiable

1016

00:35:02,310 --> 00:35:00,480

testable and supportable and uh frankly

1017

00:35:05,270 --> 00:35:02,320

can be published so you don't want to

1018

00:35:07,030 --> 00:35:05,280

get too wild and uh

1019

00:35:09,510 --> 00:35:07,040

like i said they published in 2001 that

1020

00:35:12,550 --> 00:35:09,520

were paid for received some criticism

1021

00:35:15,670 --> 00:35:12,560

and in 2005 a little bit before that uh

1022

00:35:16,710 --> 00:35:15,680

dr alan west a gfs geophysicist out in

1023

00:35:21,670 --> 00:35:16,720

uh

1024

00:35:23,109 --> 00:35:21,680

took an interest in looking back into

1025

00:35:25,589 --> 00:35:23,119

this particularly dr west he had a

1026  
00:35:26,710 --> 00:35:25,599  
certain approach that was uh a stroke of

1027  
00:35:28,069 --> 00:35:26,720  
genius

1028  
00:35:31,109 --> 00:35:28,079  
frankly

1029  
00:35:33,349 --> 00:35:31,119  
from a limited budget standpoint how do

1030  
00:35:35,430 --> 00:35:33,359  
you go and and best approach the study

1031  
00:35:37,750 --> 00:35:35,440  
of of this event

1032  
00:35:38,790 --> 00:35:37,760  
and that was to go to

1033  
00:35:40,310 --> 00:35:38,800  
uh

1034  
00:35:42,790 --> 00:35:40,320  
well dated

1035  
00:35:45,109 --> 00:35:42,800  
well accepted

1036  
00:35:47,270 --> 00:35:45,119  
beyond contention

1037  
00:35:50,150 --> 00:35:47,280  
dated archaeological sites from the

1038  
00:35:52,230 --> 00:35:50,160

paleo period and the clovis times you

1039

00:35:53,589 --> 00:35:52,240

know roughly you know thirteen thousand

1040

00:35:56,150 --> 00:35:53,599

to twelve thousand eight hundred twelve

1041

00:35:58,150 --> 00:35:56,160

thousand seven hundred years ago

1042

00:35:59,349 --> 00:35:58,160

and test the soil there and see what we

1043

00:36:02,230 --> 00:35:59,359

see

1044

00:36:03,750 --> 00:36:02,240

and what you do by doing that is

1045

00:36:06,470 --> 00:36:03,760

hopefully eliminate and of course it

1046

00:36:08,390 --> 00:36:06,480

certainly didn't but uh it it it was a

1047

00:36:11,030 --> 00:36:08,400

good a good basis to get the publication

1048

00:36:13,270 --> 00:36:11,040

started the controversies over when how

1049

00:36:15,270 --> 00:36:13,280

old your soil is if you went out and dug

1050

00:36:17,510 --> 00:36:15,280

a hole in your backyard and said i found

1051

00:36:19,349 --> 00:36:17,520

the black mat and

1052

00:36:21,750 --> 00:36:19,359

got some carbon testing on it and date

1053

00:36:23,750 --> 00:36:21,760

testing and said okay this dates to that

1054

00:36:25,510 --> 00:36:23,760

you're just gonna have a tougher road

1055

00:36:27,190 --> 00:36:25,520

than if you go to a place that's been

1056

00:36:28,790 --> 00:36:27,200

you know studied for the last 40 years

1057

00:36:30,630 --> 00:36:28,800

since radiocarbon

1058

00:36:32,150 --> 00:36:30,640

dating's been around and has had

1059

00:36:34,470 --> 00:36:32,160

hundreds and hundreds and hundreds of

1060

00:36:36,870 --> 00:36:34,480

samples taken and and confirmation that

1061

00:36:40,790 --> 00:36:36,880

they know exactly how old it is

1062

00:36:42,870 --> 00:36:40,800

so it was as simple as uh

1063

00:36:44,230 --> 00:36:42,880

or perhaps as complicated is contacting

1064

00:36:45,750 --> 00:36:44,240

archaeologists telling them that you

1065

00:36:47,190 --> 00:36:45,760

wanted to come out and take a sample of

1066

00:36:49,270 --> 00:36:47,200

their site

1067

00:36:52,230 --> 00:36:49,280

and uh the first two of those were

1068

00:36:54,390 --> 00:36:52,240

blackwater draw in new mexico and murray

1069

00:36:57,030 --> 00:36:54,400

springs in arizona blackwater draw being

1070

00:36:58,630 --> 00:36:57,040

the actual type site where they

1071

00:37:00,069 --> 00:36:58,640

named the clovis once outside of clovis

1072

00:37:02,790 --> 00:37:00,079

new mexico

1073

00:37:04,390 --> 00:37:02,800

and named the point after the points

1074

00:37:06,069 --> 00:37:04,400

that were found there

1075

00:37:07,589 --> 00:37:06,079

some of the earliest uh maybe the

1076

00:37:10,230 --> 00:37:07,599

earliest that were found

1077

00:37:11,910 --> 00:37:10,240

now i believe the these these locations

1078

00:37:13,349 --> 00:37:11,920

are actually published in a paper that

1079

00:37:15,430 --> 00:37:13,359

uh was released

1080

00:37:17,190 --> 00:37:15,440

um by

1081

00:37:19,109 --> 00:37:17,200

this by by a team i think i think may

1082

00:37:22,310 --> 00:37:19,119

you may have actually been part of it uh

1083

00:37:23,829 --> 00:37:22,320

which was released to late 2016.

1084

00:37:25,589 --> 00:37:23,839

and i think that was actually the first

1085

00:37:27,670 --> 00:37:25,599

the first master class that we'd had

1086

00:37:29,030 --> 00:37:27,680

that we had held for patrons and i

1087

00:37:30,710 --> 00:37:29,040

presented that paper

1088

00:37:32,550 --> 00:37:30,720

i think i know the paper you're probably

1089

00:37:34,630 --> 00:37:32,560

talking about which is probably is more

1090

00:37:37,430 --> 00:37:34,640

even welcomed in our papers is probably

1091

00:37:39,589 --> 00:37:37,440

um alex andronikov i think yeah that's

1092

00:37:42,390 --> 00:37:39,599

actually that's the paper

1093

00:37:43,670 --> 00:37:42,400

wonderful wonderful publication and it

1094

00:37:45,910 --> 00:37:43,680

was particularly exciting to us and

1095

00:37:48,550 --> 00:37:45,920

continues to be because we have had zero

1096

00:37:50,150 --> 00:37:48,560

contact with alex andronikov

1097

00:37:53,109 --> 00:37:50,160

i do not think there has been even an

1098

00:37:54,150 --> 00:37:53,119

email exchanged with him

1099

00:37:56,950 --> 00:37:54,160

and

1100

00:37:58,870 --> 00:37:56,960

you might guess why chris why

1101

00:38:00,470 --> 00:37:58,880

uh because it's probably

1102

00:38:02,069 --> 00:38:00,480

a lot more true and they want to get to

1103

00:38:03,829 --> 00:38:02,079

it first before you guys

1104

00:38:06,150 --> 00:38:03,839

well no it's a little bit more with our

1105

00:38:07,510 --> 00:38:06,160

critics we don't want to accuse you know

1106

00:38:10,069 --> 00:38:07,520

we don't want him to be accused of

1107

00:38:12,710 --> 00:38:10,079

collaborating with us ah okay because we

1108

00:38:14,710 --> 00:38:12,720

have been so smeared if you will

1109

00:38:16,230 --> 00:38:14,720

and you know i take that as part of the

1110

00:38:19,030 --> 00:38:16,240

game at least

1111

00:38:20,710 --> 00:38:19,040

the the now scientific cynic in me but

1112

00:38:21,990 --> 00:38:20,720

you got to be careful with these guys

1113

00:38:23,829 --> 00:38:22,000

that are going out and independently

1114

00:38:26,150 --> 00:38:23,839

proving it now as we'll see in the

1115

00:38:27,750 --> 00:38:26,160

presentation there has been a series of

1116

00:38:30,550 --> 00:38:27,760

people who have independently confirmed

1117

00:38:31,990 --> 00:38:30,560

it and then joined our subsequent papers

1118

00:38:34,710 --> 00:38:32,000

because they reached out and asked for

1119

00:38:37,030 --> 00:38:34,720

our assistance for instance right

1120

00:38:38,069 --> 00:38:37,040

um then they're on the team

1121

00:38:39,750 --> 00:38:38,079

and

1122

00:38:42,150 --> 00:38:39,760

to our critics that means that they've

1123

00:38:44,150 --> 00:38:42,160

been sullied and somehow drank the

1124

00:38:45,750 --> 00:38:44,160

kool-aid and have joined the colt and

1125

00:38:47,910 --> 00:38:45,760

whatnot so if you show up on one of our

1126

00:38:49,829 --> 00:38:47,920

papers you know you you've somehow lost

1127

00:38:51,510 --> 00:38:49,839

your scientific credibility if you're

1128

00:38:53,270 --> 00:38:51,520

independently publishing i guess they

1129

00:38:55,109 --> 00:38:53,280

say they also are drinking kool-aid that

1130

00:38:57,750 --> 00:38:55,119

they're mixing for themselves

1131

00:38:59,349 --> 00:38:57,760

but it to maintain some distance between

1132

00:39:01,750 --> 00:38:59,359

these independent researchers that's

1133

00:39:03,109 --> 00:39:01,760

what we call them

1134

00:39:06,150 --> 00:39:03,119

they need to be independent and that was

1135

00:39:08,550 --> 00:39:06,160

tremendously welcome to see andronikov i

1136

00:39:10,630 --> 00:39:08,560

think has published now four papers or

1137

00:39:13,829 --> 00:39:10,640

so with the most significant being the

1138

00:39:16,310 --> 00:39:13,839

2016 paper which was implications of the

1139

00:39:18,390 --> 00:39:16,320

discovery of platinum group metals and

1140

00:39:19,670 --> 00:39:18,400

uh spherules

1141

00:39:23,670 --> 00:39:19,680

i've got it here and we can look at

1142

00:39:26,950 --> 00:39:23,680

later at blackwater draw so he confirmed

1143

00:39:28,630 --> 00:39:26,960

what we had said in 2007 in subsequent

1144

00:39:30,630 --> 00:39:28,640

papers and blackwater draw continues to

1145

00:39:32,550 --> 00:39:30,640

be one of the the sites that

1146

00:39:34,230 --> 00:39:32,560

um that we use to demonstrate that

1147

00:39:36,069 --> 00:39:34,240

something anomalous tremendously

1148

00:39:37,510 --> 00:39:36,079

anomalous happened at that time have you

1149

00:39:39,030 --> 00:39:37,520

considered just like driving a party bus

1150

00:39:40,230 --> 00:39:39,040

up to wherever these guys are who are

1151  
00:39:41,829 --> 00:39:40,240  
holding you know holding back and

1152  
00:39:43,190 --> 00:39:41,839  
smearing you and just sits like [h\_\_h]

1153  
00:39:45,270 --> 00:39:43,200  
come on let's get in we're going to fix

1154  
00:39:47,670 --> 00:39:45,280  
science and just that's exactly the way

1155  
00:39:51,510 --> 00:39:47,680  
i think man that that's my kind of thing

1156  
00:39:51,520 --> 00:39:55,030  
we've got scotch come on

1157  
00:39:59,670 --> 00:39:57,829  
you know uh well on my way out in a

1158  
00:40:01,829 --> 00:39:59,680  
field out in flagstaff arizona with one

1159  
00:40:04,150 --> 00:40:01,839  
of our most persistent critics

1160  
00:40:08,470 --> 00:40:06,710  
they ain't friendly to it

1161  
00:40:11,030 --> 00:40:08,480  
well and we were funny then it got a lot

1162  
00:40:12,550 --> 00:40:11,040  
nastier after that uh that was kind of

1163  
00:40:14,950 --> 00:40:12,560

in the early days when the criticism was

1164

00:40:16,710 --> 00:40:14,960

muted but as we continued to publish the

1165

00:40:17,910 --> 00:40:16,720

criticism became you know more and more

1166

00:40:20,710 --> 00:40:17,920

strident

1167

00:40:23,670 --> 00:40:20,720

and we continued to bear the burden of

1168

00:40:24,870 --> 00:40:23,680

some very very determined

1169

00:40:27,109 --> 00:40:24,880

critics

1170

00:40:29,510 --> 00:40:27,119

of these publications now

1171

00:40:31,349 --> 00:40:29,520

what's so frustrating about it is when

1172

00:40:33,349 --> 00:40:31,359

you're working with

1173

00:40:36,230 --> 00:40:33,359

controversial science call it friends

1174

00:40:39,190 --> 00:40:36,240

science non-spring mainstream science i

1175

00:40:41,190 --> 00:40:39,200

would just call it new science

1176

00:40:42,710 --> 00:40:41,200

um

1177

00:40:45,430 --> 00:40:42,720

that

1178

00:40:47,510 --> 00:40:45,440

people do not um not lost my train of

1179

00:40:49,349 --> 00:40:47,520

mine there that that that when you're

1180

00:40:52,630 --> 00:40:49,359

working with that kind of stuff they

1181

00:40:54,470 --> 00:40:52,640

they do not want to uh give you the the

1182

00:40:55,589 --> 00:40:54,480

fair shake that you deserve

1183

00:40:57,190 --> 00:40:55,599

okay

1184

00:40:59,270 --> 00:40:57,200

and what they tell you you hear time and

1185

00:41:00,550 --> 00:40:59,280

time again and i know you guys that that

1186

00:41:02,309 --> 00:41:00,560

work with a lot of different subjects

1187

00:41:04,150 --> 00:41:02,319

see this that you hear from the critics

1188

00:41:06,950 --> 00:41:04,160

they'll say well just get me some

1189

00:41:10,069 --> 00:41:06,960

peer-reviewed papers you all get it into

1190

00:41:12,309 --> 00:41:10,079

the journals the scientific method works

1191

00:41:14,630 --> 00:41:12,319

it's worked for 400 years

1192

00:41:17,589 --> 00:41:14,640

if there is a bigfoot then get me a

1193

00:41:20,069 --> 00:41:17,599

paper sure about it right well and then

1194

00:41:22,470 --> 00:41:20,079

one honest discussion and what is so

1195

00:41:25,270 --> 00:41:22,480

damned frustrating about this subject is

1196

00:41:27,190 --> 00:41:25,280

we play by the rules

1197

00:41:28,870 --> 00:41:27,200

we got it in the peer-reviewed public

1198

00:41:31,030 --> 00:41:28,880

that's actually you shouldn't put it we

1199

00:41:32,630 --> 00:41:31,040

were welcome to be published in the in

1200

00:41:33,750 --> 00:41:32,640

peer-reviewed papers

1201

00:41:35,109 --> 00:41:33,760

um

1202

00:41:36,550 --> 00:41:35,119

and content

1203

00:41:38,790 --> 00:41:36,560

and then they move the goal post if you

1204

00:41:40,390 --> 00:41:38,800

will yeah of course they do yeah

1205

00:41:42,309 --> 00:41:40,400

so let me tell you if you ever show up

1206

00:41:44,550 --> 00:41:42,319

with a bigfoot in nature the fight ain't

1207

00:41:46,550 --> 00:41:44,560

over and you don't expect it to be but

1208

00:41:48,870 --> 00:41:46,560

it's just again the stridency with which

1209

00:41:50,790 --> 00:41:48,880

they conducted and the manipulations

1210

00:41:51,910 --> 00:41:50,800

that and i left all this stuff out of my

1211

00:41:53,589 --> 00:41:51,920

powerpoints i can talk about it

1212

00:41:56,790 --> 00:41:53,599

anecdotally you know

1213

00:41:58,309 --> 00:41:56,800

uh but but it's been really the the main

1214

00:41:59,670 --> 00:41:58,319

revelation on my part and just the

1215

00:42:02,470 --> 00:41:59,680

general science is how tough these

1216

00:42:04,230 --> 00:42:02,480

things are but but you know what you

1217

00:42:05,990 --> 00:42:04,240

want a friend get a dog right what's the

1218

00:42:07,510 --> 00:42:06,000

main contention why why why is there

1219

00:42:08,950 --> 00:42:07,520

such

1220

00:42:11,589 --> 00:42:08,960

venomous

1221

00:42:13,430 --> 00:42:11,599

opposition to this possibility like what

1222

00:42:14,950 --> 00:42:13,440

what what are the critics saying like

1223

00:42:17,670 --> 00:42:14,960

and not just for me well it couldn't

1224

00:42:18,950 --> 00:42:17,680

have happened why and

1225

00:42:20,790 --> 00:42:18,960

i also understand that there's a whole

1226

00:42:21,990 --> 00:42:20,800

eagle thing

1227

00:42:24,230 --> 00:42:22,000

i'm sorry

1228

00:42:26,550 --> 00:42:24,240

just the source of their animus what

1229

00:42:28,230 --> 00:42:26,560

what drives the bile against it

1230

00:42:29,190 --> 00:42:28,240

pretty much like why why why are they

1231

00:42:31,190 --> 00:42:29,200

such

1232

00:42:35,030 --> 00:42:31,200

why are they being dicks

1233

00:42:36,710 --> 00:42:35,040

this is my own opinion but this is an

1234

00:42:38,390 --> 00:42:36,720

informal podcast and this is what it's

1235

00:42:39,670 --> 00:42:38,400

made for but this is what george howard

1236

00:42:41,829 --> 00:42:39,680

thinks

1237

00:42:43,109 --> 00:42:41,839

that it's twofold

1238

00:42:46,470 --> 00:42:43,119

that one

1239

00:42:48,630 --> 00:42:46,480  
a tremendous catastrophe and

1240

00:42:50,630 --> 00:42:48,640  
you know prehistorical

1241

00:42:52,150 --> 00:42:50,640  
times but within the you know homo

1242

00:42:54,069 --> 00:42:52,160  
sapiens and

1243

00:42:55,589 --> 00:42:54,079  
obviously given gobekli tepe you know

1244

00:42:57,270 --> 00:42:55,599  
times where there certainly were

1245

00:42:59,030 --> 00:42:57,280  
cultures and civilizations because we're

1246

00:43:01,030 --> 00:42:59,040  
not civilizations and we'll have to talk

1247

00:43:03,510 --> 00:43:01,040  
to graham about that possibly so but

1248

00:43:05,670 --> 00:43:03,520  
accepted that there were cultures and

1249

00:43:07,750 --> 00:43:05,680  
people with very primitive technologies

1250

00:43:10,950 --> 00:43:07,760  
on the landscape and whatnot if it's

1251

00:43:12,550 --> 00:43:10,960

proven that there was a a time and

1252

00:43:14,470 --> 00:43:12,560

theoretically in distant memory where

1253

00:43:15,670 --> 00:43:14,480

there was a tremendous cataclysm it

1254

00:43:16,710 --> 00:43:15,680

justifies

1255

00:43:19,990 --> 00:43:16,720

if you will

1256

00:43:21,829 --> 00:43:20,000

among other things the christian right

1257

00:43:23,270 --> 00:43:21,839

and most of these scientists at least i

1258

00:43:25,510 --> 00:43:23,280

could name a few names i might get into

1259

00:43:27,990 --> 00:43:25,520

it after another scotch or two but these

1260

00:43:31,190 --> 00:43:28,000

guys are generally atheists which is

1261

00:43:32,870 --> 00:43:31,200

just fine with me you know i uh

1262

00:43:35,349 --> 00:43:32,880

listen to several atheist podcasts very

1263

00:43:36,550 --> 00:43:35,359

interested in whatnot and uh you know

1264

00:43:39,030 --> 00:43:36,560

i'm kind of a

1265

00:43:40,390 --> 00:43:39,040

christmas and easter episcopalian myself

1266

00:43:42,550 --> 00:43:40,400

so i can't claim a whole lot of

1267

00:43:45,270 --> 00:43:42,560

religious credibility but most these

1268

00:43:47,670 --> 00:43:45,280

guys do not want to see

1269

00:43:49,829 --> 00:43:47,680

anything that smacks

1270

00:43:52,230 --> 00:43:49,839

of support

1271

00:43:54,390 --> 00:43:52,240

for the ancient traditions

1272

00:43:56,069 --> 00:43:54,400

particularly those of christians that

1273

00:43:58,069 --> 00:43:56,079

that's one level of it now i'll finish

1274

00:44:00,309 --> 00:43:58,079

with this part in a second but yeah

1275

00:44:02,390 --> 00:44:00,319

let's just go ahead and say it the flood

1276

00:44:05,270 --> 00:44:02,400

okay

1277

00:44:08,550 --> 00:44:05,280

our mythology within you know christian

1278

00:44:09,990 --> 00:44:08,560

communities is that just like 315 others

1279

00:44:13,510 --> 00:44:10,000

around the world

1280

00:44:16,309 --> 00:44:13,520

um religions and ancient oral traditions

1281

00:44:18,870 --> 00:44:16,319

is that there was a tremendous cataclysm

1282

00:44:20,550 --> 00:44:18,880

uh in the past and that involved vast

1283

00:44:21,829 --> 00:44:20,560

amounts of water

1284

00:44:23,589 --> 00:44:21,839

and i was just talking with other

1285

00:44:25,990 --> 00:44:23,599

researchers about it last night you know

1286

00:44:27,910 --> 00:44:26,000

for 40 was it 40 days and 40 nights

1287

00:44:29,589 --> 00:44:27,920

might might be a a pretty good estimate

1288

00:44:31,510 --> 00:44:29,599

of what happened

1289

00:44:33,990 --> 00:44:31,520

and i don't think that they want to lend

1290

00:44:36,230 --> 00:44:34,000

any legitimacy of that because

1291

00:44:38,790 --> 00:44:36,240

with some justification that stuff was

1292

00:44:39,750 --> 00:44:38,800

beat back 150 years ago well the

1293

00:44:42,710 --> 00:44:39,760

original

1294

00:44:44,630 --> 00:44:42,720

catastrophists

1295

00:44:45,829 --> 00:44:44,640

there you go absolutely they were so

1296

00:44:47,270 --> 00:44:45,839

like they're they're taking the entire

1297

00:44:48,150 --> 00:44:47,280

thing

1298

00:44:50,150 --> 00:44:48,160

yeah

1299

00:44:51,829 --> 00:44:50,160

like i don't understand where that could

1300

00:44:53,990 --> 00:44:51,839

come from because even if you look at

1301

00:44:55,750 --> 00:44:54,000

the story of noah that's coming from

1302

00:44:58,069 --> 00:44:55,760

like that source was from the story of

1303

00:45:00,390 --> 00:44:58,079

gilgamesh which is ancient samaria which

1304

00:45:03,190 --> 00:45:00,400

is six thousand years ago plus

1305

00:45:05,589 --> 00:45:03,200

so if they're saying well it you know it

1306

00:45:07,910 --> 00:45:05,599

validates the bible no it validates

1307

00:45:09,430 --> 00:45:07,920

stories that are much older than that

1308

00:45:12,309 --> 00:45:09,440

possible and stories that are much older

1309

00:45:13,670 --> 00:45:12,319

than that that are worldwide yeah that's

1310

00:45:15,670 --> 00:45:13,680

why i think that they're kind of off and

1311

00:45:18,790 --> 00:45:15,680

again it's just a feel i think it just

1312

00:45:21,109 --> 00:45:18,800

it comes too close to even get near that

1313

00:45:23,990 --> 00:45:21,119

when if you ask me i do personally you

1314

00:45:26,309 --> 00:45:24,000

know given my research and and just you

1315

00:45:28,309 --> 00:45:26,319

know general knowledge on the subject

1316

00:45:30,870 --> 00:45:28,319

that i think it was the 8 500 year event

1317

00:45:33,030 --> 00:45:30,880

that also caused a major major climate

1318

00:45:34,390 --> 00:45:33,040

perturbation that's on relatively

1319

00:45:36,470 --> 00:45:34,400

unexplained but that was eight thousand

1320

00:45:38,069 --> 00:45:36,480

five hundred years ago five thousand bc

1321

00:45:40,630 --> 00:45:38,079

at six seven yeah

1322

00:45:41,910 --> 00:45:40,640

and there was a big downturn then too

1323

00:45:43,349 --> 00:45:41,920

and i think that was more likely what

1324

00:45:45,589 --> 00:45:43,359

was being described in the big flood

1325

00:45:47,030 --> 00:45:45,599

myths well what was that

1326

00:45:48,309 --> 00:45:47,040

uh it's just another if you go and look

1327

00:45:49,829 --> 00:45:48,319

at the climate record that was a big

1328

00:45:51,990 --> 00:45:49,839

downturn that there been a number of

1329

00:45:53,829 --> 00:45:52,000

events since 13 000 years ago happy to

1330

00:45:55,670 --> 00:45:53,839

discuss that best i can

1331

00:45:57,589 --> 00:45:55,680

but that's why

1332

00:45:59,829 --> 00:45:57,599

yeah well yeah

1333

00:46:01,589 --> 00:45:59,839

you know what i look at it and i don't

1334

00:46:03,750 --> 00:46:01,599

mean to get ahead of myself

1335

00:46:06,710 --> 00:46:03,760

and you know shoot all my wad right away

1336

00:46:10,710 --> 00:46:08,950

this this is not just a single event any

1337

00:46:12,309 --> 00:46:10,720

more than the dinosaur killer was a

1338

00:46:13,670 --> 00:46:12,319

single event

1339

00:46:16,309 --> 00:46:13,680

what it is it's almost like we're

1340

00:46:19,430 --> 00:46:16,319

looking at a telescope into the past

1341

00:46:21,349 --> 00:46:19,440

and we're bringing into focus

1342

00:46:23,750 --> 00:46:21,359

and trying to resolve

1343

00:46:25,510 --> 00:46:23,760

catastrophes in the past and we're using

1344

00:46:27,910 --> 00:46:25,520

our analytical tools which have never

1345

00:46:30,150 --> 00:46:27,920

ever been better there would be no way

1346

00:46:32,470 --> 00:46:30,160

to prove any of this any earlier than 10

1347

00:46:34,790 --> 00:46:32,480

or 15 years ago they just didn't have

1348

00:46:36,710 --> 00:46:34,800

the analytical tools there wasn't a

1349

00:46:39,030 --> 00:46:36,720

transmission electron microscope and you

1350

00:46:41,430 --> 00:46:39,040

know at every university etc

1351  
00:46:43,510 --> 00:46:41,440  
um and the geochemical probes and all

1352  
00:46:45,109 --> 00:46:43,520  
that so now that we've got the tools

1353  
00:46:46,870 --> 00:46:45,119  
what's going to happen and it happened

1354  
00:46:49,349 --> 00:46:46,880  
first what do you see when you're

1355  
00:46:51,430 --> 00:46:49,359  
focusing in on things that are distant

1356  
00:46:53,510 --> 00:46:51,440  
you see the largest thing first now it

1357  
00:46:55,270 --> 00:46:53,520  
may be further than the closer thing not

1358  
00:46:56,790 --> 00:46:55,280  
mean to get too weird on you right away

1359  
00:46:58,069 --> 00:46:56,800  
but if you look at these catastrophes

1360  
00:47:00,550 --> 00:46:58,079  
the first thing you're going to see is

1361  
00:47:02,470 --> 00:47:00,560  
the biggest baddest one

1362  
00:47:04,309 --> 00:47:02,480  
that happened now it is a long time ago

1363  
00:47:05,990 --> 00:47:04,319

but it was also so big and bad and

1364

00:47:07,349 --> 00:47:06,000

caused such a horrible extension that we

1365

00:47:09,030 --> 00:47:07,359

caught on to it first and that was the

1366

00:47:11,349 --> 00:47:09,040

dinosaur killer

1367

00:47:13,430 --> 00:47:11,359

at chichalu and the yucatan 63 million

1368

00:47:14,790 --> 00:47:13,440

years ago that's the first thing we were

1369

00:47:16,710 --> 00:47:14,800

able to identify

1370

00:47:18,630 --> 00:47:16,720

and that was a hell of a fight i mean it

1371

00:47:19,910 --> 00:47:18,640

took alvarez and hell he had a nobel

1372

00:47:23,109 --> 00:47:19,920

prize

1373

00:47:25,030 --> 00:47:23,119

in other fields uh going into it it took

1374

00:47:28,150 --> 00:47:25,040

them from 1980

1375

00:47:31,190 --> 00:47:28,160

to roughly 1994 14 years

1376

00:47:32,710 --> 00:47:31,200

to get it into the textbooks

1377

00:47:34,150 --> 00:47:32,720

and it's still disputed and it should be

1378

00:47:36,710 --> 00:47:34,160

disputed everything should be disputed

1379

00:47:39,030 --> 00:47:36,720

at all times to some degree

1380

00:47:40,710 --> 00:47:39,040

but but that was the first thing we saw

1381

00:47:42,630 --> 00:47:40,720

in the past of this nature with modern

1382

00:47:43,829 --> 00:47:42,640

analytical tools

1383

00:47:46,309 --> 00:47:43,839

that's not the last thing we're going to

1384

00:47:50,710 --> 00:47:48,550

the next thing we found and there were

1385

00:47:52,470 --> 00:47:50,720

probably precursors to this as well and

1386

00:47:56,550 --> 00:47:52,480

can discuss that's probably something 35

1387

00:47:58,230 --> 00:47:56,560

000 years ago but was the 13 000 of them

1388

00:48:00,790 --> 00:47:58,240

that was as dramatic as anything that

1389

00:48:02,470 --> 00:48:00,800

had happened since uh i think about 16

1390

00:48:04,470 --> 00:48:02,480

million years ago

1391

00:48:06,069 --> 00:48:04,480

okay and you can't ascribe every

1392

00:48:08,069 --> 00:48:06,079

extinction to

1393

00:48:09,750 --> 00:48:08,079

you know cosmic impacts

1394

00:48:11,910 --> 00:48:09,760

but i think a significant amount of them

1395

00:48:13,190 --> 00:48:11,920

did occur that way i think the two that

1396

00:48:15,589 --> 00:48:13,200

we're discussing right now that have

1397

00:48:17,430 --> 00:48:15,599

been well published occurred that way

1398

00:48:18,470 --> 00:48:17,440

and there have been other

1399

00:48:20,710 --> 00:48:18,480

events

1400

00:48:22,390 --> 00:48:20,720

since

1401

00:48:25,510 --> 00:48:22,400

bronze age civilizations were brought

1402

00:48:26,950 --> 00:48:25,520

down roughly you know 4 000 to 4 300

1403

00:48:28,630 --> 00:48:26,960

years ago

1404

00:48:30,470 --> 00:48:28,640

um and have done some work in that

1405

00:48:31,750 --> 00:48:30,480

regard traveled to you know

1406

00:48:34,470 --> 00:48:31,760

archeologically

1407

00:48:36,069 --> 00:48:34,480

go ahead is there a possibility that it

1408

00:48:37,510 --> 00:48:36,079

that any of these were caused by vern

1409

00:48:40,630 --> 00:48:37,520

shot

1410

00:48:42,150 --> 00:48:40,640

heard the term give me another can we

1411

00:48:44,950 --> 00:48:42,160

help that okay well here's here's an

1412

00:48:47,109 --> 00:48:44,960

example let's say the um yellowstone

1413

00:48:51,109 --> 00:48:47,119

blows

1414

00:48:52,630 --> 00:48:51,119

uh and you know a large solid mass of

1415

00:48:54,390 --> 00:48:52,640

something gets thrown up into into

1416

00:48:55,270 --> 00:48:54,400

sub-orbit and then crashes back down

1417

00:48:59,430 --> 00:48:55,280

into

1418

00:49:00,390 --> 00:48:59,440

shot it's it's essentially

1419

00:49:01,190 --> 00:49:00,400

your

1420

00:49:02,870 --> 00:49:01,200

you know

1421

00:49:04,309 --> 00:49:02,880

it's it's like a self-created mass

1422

00:49:05,510 --> 00:49:04,319

driver it's like if you

1423

00:49:07,270 --> 00:49:05,520

throw something

1424

00:49:09,270 --> 00:49:07,280

you know and just think about it this

1425

00:49:10,710 --> 00:49:09,280

way you throw you throw a football

1426  
00:49:12,390 --> 00:49:10,720  
straight up and then it comes back and

1427  
00:49:13,910 --> 00:49:12,400  
just smacks it flat in the face and your

1428  
00:49:15,190 --> 00:49:13,920  
friends laugh at you that's kind of the

1429  
00:49:16,549 --> 00:49:15,200  
the same thing except for instead of

1430  
00:49:18,950 --> 00:49:16,559  
your friends laughing at you you've got

1431  
00:49:20,790 --> 00:49:18,960  
worldwide devastation

1432  
00:49:22,950 --> 00:49:20,800  
well i hate to be caught flat-footed on

1433  
00:49:24,790 --> 00:49:22,960  
any oddball geological theories i've

1434  
00:49:26,309 --> 00:49:24,800  
heard of it but i'm not familiar but it

1435  
00:49:27,990 --> 00:49:26,319  
sounds are you talking about a

1436  
00:49:30,230 --> 00:49:28,000  
subsurface you know a volcanic type

1437  
00:49:32,309 --> 00:49:30,240  
explosion basically yes like you know

1438  
00:49:33,910 --> 00:49:32,319

the the earth just like timberlaw

1439

00:49:37,670 --> 00:49:33,920

yeah like it just you know the earth

1440

00:49:39,349 --> 00:49:37,680

will just belch out this mass of of rock

1441

00:49:41,190 --> 00:49:39,359

or you know molten something and it just

1442

00:49:42,630 --> 00:49:41,200

comes crashing back down earth well

1443

00:49:44,710 --> 00:49:42,640

those are the pipes that produce

1444

00:49:46,549 --> 00:49:44,720

diamonds you know kimberlite pipes which

1445

00:49:49,829 --> 00:49:46,559

have never been adequately explained to

1446

00:49:51,750 --> 00:49:49,839

my you know non-professional opinion and

1447

00:49:53,510 --> 00:49:51,760

reading through it over the years that

1448

00:49:55,030 --> 00:49:53,520

the process by which diamonds occurred

1449

00:49:57,109 --> 00:49:55,040

you know they're rocking up through the

1450

00:49:59,109 --> 00:49:57,119

earth that uh you know

1451

00:50:01,910 --> 00:49:59,119

supersonic speeds

1452

00:50:03,910 --> 00:50:01,920

from very very deep very very quickly

1453

00:50:06,230 --> 00:50:03,920

and there's not a not a acceptable

1454

00:50:08,309 --> 00:50:06,240

explanation for that in my opinion

1455

00:50:10,950 --> 00:50:08,319

um and i'm not sure if a vern shot might

1456

00:50:13,109 --> 00:50:10,960

might be just a you know a a

1457

00:50:15,349 --> 00:50:13,119

an extreme kimberlite but along those

1458

00:50:16,950 --> 00:50:15,359

same lines and i'll show you some

1459

00:50:19,109 --> 00:50:16,960

folks they're doing some great work

1460

00:50:21,190 --> 00:50:19,119

along the idea of

1461

00:50:23,349 --> 00:50:21,200

uh that some of the material that was

1462

00:50:25,910 --> 00:50:23,359

ejected in our event actually did go

1463

00:50:27,109 --> 00:50:25,920

into orbit and landed quite a far piece

1464

00:50:29,510 --> 00:50:27,119

away

1465

00:50:31,270 --> 00:50:29,520

okay in the southern hemisphere and uh

1466

00:50:34,710 --> 00:50:31,280

i'll show you some of that as we get to

1467

00:50:38,150 --> 00:50:36,870

oh man oh this is this is awesome

1468

00:50:40,950 --> 00:50:38,160

everyone's just like this is the

1469

00:50:43,750 --> 00:50:40,960

greatest show ever in chat right now

1470

00:50:45,349 --> 00:50:43,760

so we're having some good fun here and

1471

00:50:47,109 --> 00:50:45,359

you know i don't i don't do any uh

1472

00:50:48,630 --> 00:50:47,119

having a great time oh yeah i know i've

1473

00:50:50,230 --> 00:50:48,640

got like this new vape

1474

00:50:52,470 --> 00:50:50,240

which like i i've been dealing with this

1475

00:50:54,069 --> 00:50:52,480

this one vape that's like made locally

1476

00:50:56,470 --> 00:50:54,079

and i'm getting this new stuff i'm i'm

1477

00:50:58,870 --> 00:50:56,480

not yeah because you know

1478

00:51:00,309 --> 00:50:58,880

ex smokers and it's really really smooth

1479

00:51:02,069 --> 00:51:00,319

and i don't have to you know have a lot

1480

00:51:03,349 --> 00:51:02,079

of it but it just tastes really good

1481

00:51:06,069 --> 00:51:03,359

it's i've been looking for like good

1482

00:51:08,150 --> 00:51:06,079

vape for a long time well as my friends

1483

00:51:10,069 --> 00:51:08,160

family and co-workers will confirm i use

1484

00:51:11,430 --> 00:51:10,079

every form of nicotine but the smoking

1485

00:51:13,109 --> 00:51:11,440

cigarette

1486

00:51:14,870 --> 00:51:13,119

i have here my

1487

00:51:17,109 --> 00:51:14,880

snooze

1488

00:51:19,190 --> 00:51:17,119

my copenhagen tobacco

1489

00:51:21,030 --> 00:51:19,200

and my vape but i hadn't had a cigarette

1490

00:51:23,190 --> 00:51:21,040

in 14 years and i lived to be 110

1491

00:51:24,390 --> 00:51:23,200

because of it nope yeah i'm just uh

1492

00:51:26,230 --> 00:51:24,400

quitting smoking myself and for all

1493

00:51:27,270 --> 00:51:26,240

those out there that are still smoking

1494

00:51:28,950 --> 00:51:27,280

stop

1495

00:51:30,870 --> 00:51:28,960

yeah there's just better ways to do it

1496

00:51:32,870 --> 00:51:30,880

oh yeah totally they're better ways to

1497

00:51:35,109 --> 00:51:32,880

do it do your lungs feel better crust oh

1498

00:51:36,710 --> 00:51:35,119

my lungs feel up like oh yeah totally no

1499

00:51:38,710 --> 00:51:36,720

night wheezing this great thing when you

1500

00:51:40,790 --> 00:51:38,720

get off of them yeah no night wheezing

1501

00:51:42,309 --> 00:51:40,800

my snoring's gone down at nothing

1502

00:51:44,790 --> 00:51:42,319

it's fantastic

1503

00:51:46,950 --> 00:51:44,800

and nicotine does not cause cancer no

1504

00:51:48,390 --> 00:51:46,960

it's it's the fertilizer it's the

1505

00:51:50,069 --> 00:51:48,400

radioactive fertilizer that they use to

1506

00:51:53,750 --> 00:51:50,079

actually make the grow the nicot or the

1507

00:51:55,510 --> 00:51:53,760

tobacco which is then absorbed by the

1508

00:51:57,109 --> 00:51:55,520

nicotine that tends to cause a lot of

1509

00:51:58,390 --> 00:51:57,119

the free radicals that go through the

1510

00:52:00,710 --> 00:51:58,400

cigarettes

1511

00:52:02,630 --> 00:52:00,720

and a unique uh psychoactive substance

1512

00:52:04,790 --> 00:52:02,640

in that it wakes you up when you were

1513

00:52:05,670 --> 00:52:04,800

tired and put you to bed when you were

1514

00:52:07,510 --> 00:52:05,680

active

1515

00:52:08,790 --> 00:52:07,520

it goes both ways

1516

00:52:11,349 --> 00:52:08,800

you want one as you go to bed and you

1517

00:52:12,790 --> 00:52:11,359

want one when you get up well it's also

1518

00:52:15,030 --> 00:52:12,800

like for

1519

00:52:16,630 --> 00:52:15,040

any smoker out there if you puff on a

1520

00:52:19,190 --> 00:52:16,640

cigarette really fast

1521

00:52:21,750 --> 00:52:19,200

you get the active ingredient so it

1522

00:52:24,870 --> 00:52:21,760

wakes you up if you pull on it very very

1523

00:52:26,630 --> 00:52:24,880

slowly it actually becomes relaxant

1524

00:52:29,430 --> 00:52:26,640

never thought about that but that stands

1525

00:52:30,150 --> 00:52:29,440

to reason in my experience yeah

1526

00:52:31,589 --> 00:52:30,160

so

1527

00:52:33,349 --> 00:52:31,599

but i digress and i think i've actually

1528

00:52:35,670 --> 00:52:33,359

lost a few people during the live

1529

00:52:38,470 --> 00:52:35,680

broadcast talking about it

1530

00:52:42,390 --> 00:52:38,480

okay back to cosmic catastrophe

1531

00:52:44,390 --> 00:52:42,400

um so if i could pick up on the timeline

1532

00:52:45,829 --> 00:52:44,400

so alan west started looking into it and

1533

00:52:47,430 --> 00:52:45,839

said well i'm going to go and check

1534

00:52:49,430 --> 00:52:47,440

these sites and he probably you know he

1535

00:52:51,910 --> 00:52:49,440

got to murray springs

1536

00:52:53,910 --> 00:52:51,920

uh blackwater draw etc and got in touch

1537

00:52:55,990 --> 00:52:53,920

with jim kennett

1538

00:52:57,589 --> 00:52:56,000

who i know that you have wanted on the

1539

00:53:00,790 --> 00:52:57,599

show and i hope he can make it on the

1540

00:53:02,870 --> 00:53:00,800

show and he's very much retired now and

1541

00:53:04,470 --> 00:53:02,880

you know has other you know family stuff

1542

00:53:06,390 --> 00:53:04,480

going on and whatnot but maybe he'll

1543

00:53:08,150 --> 00:53:06,400

make time at some point he's a wonderful

1544

00:53:09,670 --> 00:53:08,160

wonderful man i've had the great

1545

00:53:11,190 --> 00:53:09,680

opportunity to travel with him a couple

1546

00:53:12,710 --> 00:53:11,200

of times wished i had done it more but

1547

00:53:14,549 --> 00:53:12,720

we stopped doing conferences they were

1548

00:53:17,990 --> 00:53:14,559

so critical

1549

00:53:20,230 --> 00:53:18,000

but jim kenneth you know alan uh is a uh

1550

00:53:21,589 --> 00:53:20,240

uh an employed uh privately employed

1551  
00:53:23,510 --> 00:53:21,599  
scientist you know he's a geophysicist

1552  
00:53:25,109 --> 00:53:23,520  
for oil companies and does geophysical

1553  
00:53:28,230 --> 00:53:25,119  
you know analysis and work he's also

1554  
00:53:30,150 --> 00:53:28,240  
retired but he you know doesn't have a

1555  
00:53:32,470 --> 00:53:30,160  
you know 30 40 years of publication

1556  
00:53:35,109 --> 00:53:32,480  
history whereas kenneth did

1557  
00:53:37,270 --> 00:53:35,119  
and before well before he had published

1558  
00:53:39,910 --> 00:53:37,280  
in but had collected those first samples

1559  
00:53:41,990 --> 00:53:39,920  
at blackwater murray springs was in

1560  
00:53:43,670 --> 00:53:42,000  
touch with kenneth laid it all out for

1561  
00:53:45,270 --> 00:53:43,680  
him what he was finding

1562  
00:53:47,270 --> 00:53:45,280  
went through the possibilities and as

1563  
00:53:48,870 --> 00:53:47,280

kenneth says in a great nova episode

1564

00:53:50,549 --> 00:53:48,880

that i've got a link to we can talk some

1565

00:53:52,470 --> 00:53:50,559

more about that later and what happened

1566

00:53:53,589 --> 00:53:52,480

to that nova episode when our book was

1567

00:53:55,910 --> 00:53:53,599

burned

1568

00:53:57,670 --> 00:53:55,920

but uh still available on youtube uh

1569

00:53:59,270 --> 00:53:57,680

kenneth talks about his fascination as a

1570

00:54:01,109 --> 00:53:59,280

child with the the loss of the

1571

00:54:02,710 --> 00:54:01,119

playstation megafauna

1572

00:54:04,309 --> 00:54:02,720

and he was from new zealand and been

1573

00:54:07,190 --> 00:54:04,319

fascinated that that all these great

1574

00:54:09,030 --> 00:54:07,200

creatures had gone away in north america

1575

00:54:11,109 --> 00:54:09,040

and actually does a very touching thing

1576  
00:54:12,470 --> 00:54:11,119  
on the program where he shows his diary

1577  
00:54:14,950 --> 00:54:12,480  
as a 10 year old kid and he's got

1578  
00:54:17,589 --> 00:54:14,960  
mammoth strong in his little diary in

1579  
00:54:19,430 --> 00:54:17,599  
the margin it was just really neat and

1580  
00:54:22,549 --> 00:54:19,440  
it maintained a fascination with it now

1581  
00:54:25,109 --> 00:54:22,559  
his specialty was paleo oceanography and

1582  
00:54:27,589 --> 00:54:25,119  
not only was it his specialty but he was

1583  
00:54:30,069 --> 00:54:27,599  
the founder is often referred to as the

1584  
00:54:32,950 --> 00:54:30,079  
founder of the discipline worldwide of

1585  
00:54:34,790 --> 00:54:32,960  
paleo oceanography the study of uh you

1586  
00:54:36,790 --> 00:54:34,800  
know the ancient climate and ancient

1587  
00:54:39,670 --> 00:54:36,800  
conditions um

1588  
00:54:41,510 --> 00:54:39,680

uh in marine sciences you know from the

1589

00:54:42,950 --> 00:54:41,520

deep deep past well then then you'd know

1590

00:54:43,829 --> 00:54:42,960

jerry dickens wouldn't you or he would

1591

00:54:47,510 --> 00:54:43,839

yeah

1592

00:54:48,710 --> 00:54:47,520

uh

1593

00:54:51,349 --> 00:54:48,720

kind of becoming a friend of mine a

1594

00:54:53,589 --> 00:54:51,359

friend of ours uh loves the show

1595

00:54:57,270 --> 00:54:53,599

yeah we just had him last uh last week

1596

00:54:58,870 --> 00:54:57,280

uh he you know i understand the the

1597

00:55:00,230 --> 00:54:58,880

uh the sciences are fairly you know

1598

00:55:03,109 --> 00:55:00,240

fairly close he actually he was the one

1599

00:55:05,829 --> 00:55:03,119

that got me in touch with with jim

1600

00:55:07,510 --> 00:55:05,839

a couple months ago so jim was the chief

1601  
00:55:09,349 --> 00:55:07,520  
scientist on one of those ships and it

1602  
00:55:10,309 --> 00:55:09,359  
might have been the one that dickinson's

1603  
00:55:12,549 --> 00:55:10,319  
own

1604  
00:55:13,829 --> 00:55:12,559  
at one time the uh jim was chief office

1605  
00:55:15,349 --> 00:55:13,839  
on the court on several quarrying

1606  
00:55:17,829 --> 00:55:15,359  
expeditions

1607  
00:55:18,950 --> 00:55:17,839  
i mean that's a hell of a you know of a

1608  
00:55:21,349 --> 00:55:18,960  
cv

1609  
00:55:23,270 --> 00:55:21,359  
and he also was very involved with wally

1610  
00:55:24,870 --> 00:55:23,280  
broker who's you know well regarded and

1611  
00:55:26,230 --> 00:55:24,880  
i have a great amount of respect for him

1612  
00:55:27,349 --> 00:55:26,240  
even though he's a critic and it's kind

1613  
00:55:29,910 --> 00:55:27,359

of you know

1614

00:55:32,630 --> 00:55:29,920

giving some support to some of our more

1615

00:55:33,430 --> 00:55:32,640

uh virulent critics but while he broker

1616

00:55:36,470 --> 00:55:33,440

you know

1617

00:55:38,630 --> 00:55:36,480

did a lot of foundational science on the

1618

00:55:40,390 --> 00:55:38,640

period that we're talking about and jim

1619

00:55:42,309 --> 00:55:40,400

did as well

1620

00:55:44,470 --> 00:55:42,319

and jim established for instance that

1621

00:55:47,109 --> 00:55:44,480

the mississippi river was a tremendous

1622

00:55:49,910 --> 00:55:47,119

outlet prior to the yd

1623

00:55:52,150 --> 00:55:49,920

for racial ice melt now when the event

1624

00:55:54,470 --> 00:55:52,160

happened it turned the other way it

1625

00:55:55,510 --> 00:55:54,480

clogged up that hole and he noticed that

1626

00:55:57,190 --> 00:55:55,520

too

1627

00:55:59,430 --> 00:55:57,200

and he had a lot of outstanding

1628

00:56:00,870 --> 00:55:59,440

questions by the time that that was got

1629

00:56:02,150 --> 00:56:00,880

to him with this stuff and provide him

1630

00:56:03,670 --> 00:56:02,160

with the firestone information and

1631

00:56:05,510 --> 00:56:03,680

firestone of course was involved as well

1632

00:56:08,390 --> 00:56:05,520

i don't mean to leave them out

1633

00:56:11,270 --> 00:56:08,400

that you had two renowned scientists

1634

00:56:12,789 --> 00:56:11,280

and you know

1635

00:56:14,309 --> 00:56:12,799

well i would call alan's nothing less

1636

00:56:19,109 --> 00:56:14,319

than a polymath he's probably one of the

1637

00:56:23,270 --> 00:56:21,270

science folks we've got in the u.s you

1638

00:56:24,470 --> 00:56:23,280

know employed in private sector

1639

00:56:25,829 --> 00:56:24,480

um

1640

00:56:27,510 --> 00:56:25,839

they got together and said well there's

1641

00:56:30,630 --> 00:56:27,520

something here

1642

00:56:34,150 --> 00:56:30,640

and they began a larger uh

1643

00:56:35,829 --> 00:56:34,160

testing uh uh array and and got samples

1644

00:56:38,390 --> 00:56:35,839

from a number of locations across north

1645

00:56:40,870 --> 00:56:38,400

america greatly expanded by now

1646

00:56:42,549 --> 00:56:40,880

and i was in touch with him at that time

1647

00:56:44,309 --> 00:56:42,559

and we wanted to go out and dig around

1648

00:56:46,630 --> 00:56:44,319

in some carolina bays and that's really

1649

00:56:48,789 --> 00:56:46,640

how i got to be a part of the papers i

1650

00:56:50,710 --> 00:56:48,799

kind of consider myself the bat boy or

1651  
00:56:50,870 --> 00:56:50,720  
the ball boy for the professional team

1652  
00:56:52,549 --> 00:56:50,880  
here

1653  
00:56:56,230 --> 00:56:52,559  
[Laughter]

1654  
00:56:57,589 --> 00:56:56,240  
23 phds and me kind of thing

1655  
00:56:59,430 --> 00:56:57,599  
which is where i'm coming from and that

1656  
00:57:00,950 --> 00:56:59,440  
may show over the thing that i do not

1657  
00:57:02,390 --> 00:57:00,960  
have a specific discipline that i can

1658  
00:57:04,069 --> 00:57:02,400  
dig all the way down in and tell you

1659  
00:57:06,309 --> 00:57:04,079  
everything i'm a generalist general so

1660  
00:57:07,510 --> 00:57:06,319  
i'm a mile wide and i hope six inches

1661  
00:57:10,150 --> 00:57:07,520  
deep

1662  
00:57:11,829 --> 00:57:10,160  
um but i was so fascinated by it so

1663  
00:57:13,030 --> 00:57:11,839

fascinated by the carolina bays and then

1664

00:57:15,190 --> 00:57:13,040

they came back and tell me they're

1665

00:57:17,589 --> 00:57:15,200

finding stuff all over the country at

1666

00:57:19,589 --> 00:57:17,599

that 13 000 year level

1667

00:57:21,270 --> 00:57:19,599

and i said i'd love to help and i'd love

1668

00:57:24,309 --> 00:57:21,280

to do some some

1669

00:57:26,069 --> 00:57:24,319

sample collection from carolina bays

1670

00:57:28,390 --> 00:57:26,079

has been documented a couple of things i

1671

00:57:30,230 --> 00:57:28,400

mean we must have sent hundreds of

1672

00:57:32,309 --> 00:57:30,240

pounds my poor office manager who still

1673

00:57:33,670 --> 00:57:32,319

works with me tiffany byla

1674

00:57:36,150 --> 00:57:33,680

packed up

1675

00:57:37,829 --> 00:57:36,160

you know dozens of boxes of sand that we

1676  
00:57:39,990 --> 00:57:37,839  
mailed out to canada at university of

1677  
00:57:41,589 --> 00:57:40,000  
california santa barbara and they would

1678  
00:57:45,190 --> 00:57:41,599  
go pick through it

1679  
00:57:47,430 --> 00:57:45,200  
and very careful scientific manner

1680  
00:57:49,270 --> 00:57:47,440  
and we would collect them literally on

1681  
00:57:51,589 --> 00:57:49,280  
the phone with them

1682  
00:57:53,589 --> 00:57:51,599  
uh early cell couldn't face time and all

1683  
00:57:54,950 --> 00:57:53,599  
that and allen would visit as well and

1684  
00:57:57,510 --> 00:57:54,960  
and others

1685  
00:57:59,589 --> 00:57:57,520  
but we would uh collect the samples and

1686  
00:58:01,589 --> 00:57:59,599  
send them out to ucsb

1687  
00:58:03,270 --> 00:58:01,599  
and they would analyze them and then

1688  
00:58:04,789 --> 00:58:03,280

report back what they were finding and

1689

00:58:06,309 --> 00:58:04,799

where

1690

00:58:08,470 --> 00:58:06,319

um interesting thing

1691

00:58:11,109 --> 00:58:08,480

uh like in ottawa canada we've got this

1692

00:58:12,710 --> 00:58:11,119

one a place called uh the art house cafe

1693

00:58:15,510 --> 00:58:12,720

it's it's essentially like this

1694

00:58:17,190 --> 00:58:15,520

the artist's cafe slash you know bar

1695

00:58:18,390 --> 00:58:17,200

hangout it's also kind of like a shared

1696

00:58:20,630 --> 00:58:18,400

space

1697

00:58:22,630 --> 00:58:20,640

oh it is it's run by a friend of mine

1698

00:58:24,069 --> 00:58:22,640

who like you know we used to have like a

1699

00:58:25,510 --> 00:58:24,079

band back in the day and then we lost

1700

00:58:27,910 --> 00:58:25,520

touch and i just realized like oh man

1701  
00:58:29,190 --> 00:58:27,920  
you run this place so i actually found

1702  
00:58:30,789 --> 00:58:29,200  
out the last time it was there about a

1703  
00:58:33,589 --> 00:58:30,799  
week and a half ago

1704  
00:58:35,829 --> 00:58:33,599  
that the place that firestone is sending

1705  
00:58:38,069 --> 00:58:35,839  
his samples up here in canada i actually

1706  
00:58:38,870 --> 00:58:38,079  
met the guy who runs the lab

1707  
00:58:40,710 --> 00:58:38,880  
who's

1708  
00:58:42,470 --> 00:58:40,720  
testing the samples

1709  
00:58:44,390 --> 00:58:42,480  
here in ottawa

1710  
00:58:46,230 --> 00:58:44,400  
like just randomly at my friend's cafe i

1711  
00:58:48,470 --> 00:58:46,240  
think the name is on the tip of my

1712  
00:58:49,670 --> 00:58:48,480  
tongue could you um i forget what it was

1713  
00:58:51,430 --> 00:58:49,680

i had a couple beers yeah there is

1714

00:58:54,309 --> 00:58:51,440

somebody it's not james bishop he's with

1715

00:58:57,829 --> 00:58:54,319

usgs um

1716

00:58:59,270 --> 00:58:57,839

oh who's the canadian helper up there

1717

00:59:01,430 --> 00:58:59,280

i could you know if i had five minutes

1718

00:59:03,190 --> 00:59:01,440

and weren't on a live podcast i'd go and

1719

00:59:04,230 --> 00:59:03,200

dig it up yeah i don't think it was on

1720

00:59:05,990 --> 00:59:04,240

the original paper but there's

1721

00:59:07,109 --> 00:59:06,000

definitely the team's grown so large now

1722

00:59:08,870 --> 00:59:07,119

you know it's a little little hard to

1723

00:59:10,309 --> 00:59:08,880

keep track of i just keep running into

1724

00:59:12,789 --> 00:59:10,319

these guys like it's yeah it's like yeah

1725

00:59:14,309 --> 00:59:12,799

yeah they're 55 all of us now i know

1726

00:59:16,950 --> 00:59:14,319

it's a slur it's like i just i i ended

1727

00:59:19,670 --> 00:59:16,960

up having you know like an hour long

1728

00:59:21,829 --> 00:59:19,680

talk with just some random guy over the

1729

00:59:23,430 --> 00:59:21,839

younger driest impact and like you know

1730

00:59:25,510 --> 00:59:23,440

the like black mat like you know like

1731

00:59:26,870 --> 00:59:25,520

what was the cause and you know just

1732

00:59:29,349 --> 00:59:26,880

getting his opinion on it and like this

1733

00:59:31,030 --> 00:59:29,359

is just randomly at some cafe in in in

1734

00:59:31,829 --> 00:59:31,040

like

1735

00:59:33,430 --> 00:59:31,839

that would downtown

1736

00:59:35,589 --> 00:59:33,440

me i'd share the same thrill you did

1737

00:59:37,270 --> 00:59:35,599

because we you know those that that

1738

00:59:39,430 --> 00:59:37,280

follow this stuff you know it's it's

1739

00:59:41,270 --> 00:59:39,440

fairly obscure but it's damned important

1740

00:59:43,030 --> 00:59:41,280

you know and you wish more people knew

1741

00:59:44,710 --> 00:59:43,040

about it because the more people that

1742

00:59:46,950 --> 00:59:44,720

know about it

1743

00:59:48,470 --> 00:59:46,960

you know is just going to uh catalyze

1744

00:59:50,470 --> 00:59:48,480

more interest and hopefully some

1745

00:59:52,230 --> 00:59:50,480

research money at some point

1746

00:59:53,990 --> 00:59:52,240

um but it's a it's neat to run into

1747

00:59:55,750 --> 00:59:54,000

people and i i could put them on one

1748

00:59:57,510 --> 00:59:55,760

hand in the last 15 years that had any

1749

00:59:58,710 --> 00:59:57,520

previous knowledge of it and to run into

1750

01:00:00,230 --> 00:59:58,720

an actual

1751

01:00:01,510 --> 01:00:00,240

you know involved researcher in

1752

01:00:02,950 --> 01:00:01,520

something that you're discussing on

1753

01:00:04,069 --> 01:00:02,960

podcasts you know there in the

1754

01:00:06,230 --> 01:00:04,079

neighborhood

1755

01:00:08,230 --> 01:00:06,240

uh that's really cool

1756

01:00:09,750 --> 01:00:08,240

it's a good sign well yeah no at least

1757

01:00:11,510 --> 01:00:09,760

it means that it's getting out there and

1758

01:00:13,349 --> 01:00:11,520

i know that yeah people like joe rogan

1759

01:00:15,750 --> 01:00:13,359

when he's done his shows with with

1760

01:00:18,549 --> 01:00:15,760

randall carlson and graham hancock you

1761

01:00:20,309 --> 01:00:18,559

know like you all of a sudden have 1.5 2

1762

01:00:22,950 --> 01:00:20,319

million 3 million people who are

1763

01:00:24,150 --> 01:00:22,960

downloading this who who are who are

1764

01:00:26,549 --> 01:00:24,160

disseminating this and then getting

1765

01:00:28,150 --> 01:00:26,559

their friends to watch it so you know i

1766

01:00:29,349 --> 01:00:28,160

can understand from from the scientific

1767

01:00:31,190 --> 01:00:29,359

standpoint where they may have some

1768

01:00:32,870 --> 01:00:31,200

pushback and saying well this is our

1769

01:00:34,710 --> 01:00:32,880

realm this is our domain we're supposed

1770

01:00:36,710 --> 01:00:34,720

to have this you know this this can't

1771

01:00:37,950 --> 01:00:36,720

like the mainstream knows this that's

1772

01:00:40,870 --> 01:00:37,960

right buddy

1773

01:00:42,710 --> 01:00:40,880

apprehensible behavior you know like

1774

01:00:45,109 --> 01:00:42,720

they go nuts over this [h\_\_h]

1775

01:00:46,309 --> 01:00:45,119

exactly and that's when i went rogue

1776

01:00:47,670 --> 01:00:46,319

personally because i have absolutely

1777

01:00:49,670 --> 01:00:47,680

nothing to lose

1778

01:00:51,270 --> 01:00:49,680

you know even some of our a lot of our

1779

01:00:52,630 --> 01:00:51,280

team you know they got to keep it in the

1780

01:00:55,109 --> 01:00:52,640

rails and they got to keep it in the

1781

01:00:56,870 --> 01:00:55,119

publications and they can't go blog and

1782

01:00:59,990 --> 01:00:56,880

say anything they want to so i got

1783

01:01:02,230 --> 01:01:00,000

terribly frustrated in 2010 we went out

1784

01:01:04,789 --> 01:01:02,240

to a american quaternary association

1785

01:01:07,030 --> 01:01:04,799

meeting gave fantastic presentations

1786

01:01:08,789 --> 01:01:07,040

were absolutely laughed at and played

1787

01:01:10,789 --> 01:01:08,799

got got the mean girl treatment in the

1788

01:01:11,910 --> 01:01:10,799

halls i mean literally mean girl stuff

1789

01:01:14,789 --> 01:01:11,920

you know

1790

01:01:16,069 --> 01:01:14,799

and it just blew me away and i could

1791

01:01:17,990 --> 01:01:16,079

discuss it more if you want but i'd

1792

01:01:20,230 --> 01:01:18,000

rather not focus on on some of the bad

1793

01:01:22,150 --> 01:01:20,240

stuff and when i left that meeting first

1794

01:01:23,270 --> 01:01:22,160

of all we decided over beers that night

1795

01:01:25,030 --> 01:01:23,280

said we're not going to do any more of

1796

01:01:26,950 --> 01:01:25,040

these damn conferences

1797

01:01:28,069 --> 01:01:26,960

there's been a couple that we've done

1798

01:01:28,789 --> 01:01:28,079

selected

1799

01:01:30,309 --> 01:01:28,799

but

1800

01:01:32,069 --> 01:01:30,319

it's just hopeless we're going to stick

1801  
01:01:33,750 --> 01:01:32,079  
to working on the publications writing

1802  
01:01:35,829 --> 01:01:33,760  
the papers collecting the samples

1803  
01:01:37,510 --> 01:01:35,839  
building the case we're not going to go

1804  
01:01:39,510 --> 01:01:37,520  
make it to the peers

1805  
01:01:40,710 --> 01:01:39,520  
because they they don't treat you with

1806  
01:01:42,230 --> 01:01:40,720  
respect

1807  
01:01:45,190 --> 01:01:42,240  
it's like a bunch of you know

1808  
01:01:46,950 --> 01:01:45,200  
five-year-olds it absolutely is and

1809  
01:01:48,069 --> 01:01:46,960  
that's when i said you know i've got

1810  
01:01:49,910 --> 01:01:48,079  
nothing to lose i'm going to start a

1811  
01:01:51,990 --> 01:01:49,920  
blog on this

1812  
01:01:56,150 --> 01:01:52,000  
and started the cosmic tusks there in

1813  
01:01:57,910 --> 01:01:56,160

2010 to try to get in my own in a very

1814

01:01:59,270 --> 01:01:57,920

occasional manner

1815

01:02:01,030 --> 01:01:59,280

some of the information out there in

1816

01:02:02,470 --> 01:02:01,040

some place where you could you know

1817

01:02:04,309 --> 01:02:02,480

check in every month or two and see

1818

01:02:06,309 --> 01:02:04,319

whether anything's happened in it and

1819

01:02:07,510 --> 01:02:06,319

i'm glad i did and also you know take

1820

01:02:08,710 --> 01:02:07,520

some shots at our critics and i

1821

01:02:10,710 --> 01:02:08,720

certainly do

1822

01:02:13,190 --> 01:02:10,720

uh mark baslow for instance if you go

1823

01:02:15,750 --> 01:02:13,200

click on the right you know uh sidebar

1824

01:02:17,270 --> 01:02:15,760

the cosmic task i got the boss files and

1825

01:02:19,349 --> 01:02:17,280

follow his critiques which have become

1826

01:02:20,789 --> 01:02:19,359

quite muted lately i might add

1827

01:02:22,630 --> 01:02:20,799

um

1828

01:02:24,470 --> 01:02:22,640

in fact it disappeared i'm sure i'll

1829

01:02:26,230 --> 01:02:24,480

hear from it tomorrow

1830

01:02:27,430 --> 01:02:26,240

but uh but i just wanted to start

1831

01:02:28,549 --> 01:02:27,440

looking at these guys and say who are

1832

01:02:29,750 --> 01:02:28,559

some of these folks you know and what

1833

01:02:31,349 --> 01:02:29,760

are they saying and what's driving them

1834

01:02:33,109 --> 01:02:31,359

what's motivating them and where are

1835

01:02:34,789 --> 01:02:33,119

they wrong in their in their critique so

1836

01:02:37,190 --> 01:02:34,799

that's a significant part of the task

1837

01:02:39,750 --> 01:02:37,200

and it was built off the frustration

1838

01:02:41,829 --> 01:02:39,760

of of getting the the cold shoulder at

1839

01:02:44,069 --> 01:02:41,839

these these conferences they should be

1840

01:02:45,910 --> 01:02:44,079

inviting us those conferences

1841

01:02:48,789 --> 01:02:45,920

you know and having honest and open

1842

01:02:51,750 --> 01:02:48,799

debate about the science instead of the

1843

01:02:53,829 --> 01:02:51,760

dismissive stuff that's going on

1844

01:02:55,510 --> 01:02:53,839

well isn't there there's this one

1845

01:02:56,789 --> 01:02:55,520

uh this one saying i'm trying to bring

1846

01:02:58,230 --> 01:02:56,799

it up here first they ignore you then

1847

01:03:00,630 --> 01:02:58,240

they laugh at you then they fight you

1848

01:03:01,670 --> 01:03:00,640

then you win

1849

01:03:03,829 --> 01:03:01,680

i think i think at this point you're

1850

01:03:05,829 --> 01:03:03,839

pretty much like almost at the wind part

1851  
01:03:13,670 --> 01:03:05,839  
well much more encouraging than science

1852  
01:03:17,829 --> 01:03:15,670  
yeah good ideas die one people all the

1853  
01:03:19,270 --> 01:03:17,839  
time and i mean honest to goodness i i

1854  
01:03:20,710 --> 01:03:19,280  
said to antonio zamora one of the

1855  
01:03:22,069 --> 01:03:20,720  
carolina bay researchers the other day

1856  
01:03:23,109 --> 01:03:22,079  
and he's not particularly old he's in

1857  
01:03:25,029 --> 01:03:23,119  
great health

1858  
01:03:26,549 --> 01:03:25,039  
but i said hey keep your health up

1859  
01:03:28,150 --> 01:03:26,559  
you're doing a great job but a lot of

1860  
01:03:30,309 --> 01:03:28,160  
these guys are in their 60s most of them

1861  
01:03:32,390 --> 01:03:30,319  
are retired and that gives a lot of them

1862  
01:03:33,829 --> 01:03:32,400  
more freedom to publish you know there's

1863  
01:03:36,230 --> 01:03:33,839

a lot about them

1864

01:03:37,190 --> 01:03:36,240

they just have nothing to give

1865

01:03:39,829 --> 01:03:37,200

yeah yeah

1866

01:03:43,589 --> 01:03:39,839

exactly no more [h\_\_h] to give exactly

1867

01:03:45,270 --> 01:03:43,599

and um exactly but have 35 40-year

1868

01:03:46,630 --> 01:03:45,280

records of publication and then they go

1869

01:03:47,829 --> 01:03:46,640

yeah i know this stuff i always figured

1870

01:03:49,349 --> 01:03:47,839

this was true

1871

01:03:51,270 --> 01:03:49,359

i always figured plato was probably

1872

01:03:54,549 --> 01:03:51,280

right too much happened

1873

01:03:57,029 --> 01:03:54,559

9 000 years before his time as he said

1874

01:03:58,470 --> 01:03:57,039

no you know there's just a lot out there

1875

01:04:00,390 --> 01:03:58,480

and you don't even you know they're

1876

01:04:02,309 --> 01:04:00,400

they're different chapters of the

1877

01:04:04,309 --> 01:04:02,319

the of the understanding of this stuff

1878

01:04:06,069 --> 01:04:04,319

and it goes back hell ignatius donnelly

1879

01:04:07,829 --> 01:04:06,079

was a u.s congressman and wrote some of

1880

01:04:09,910 --> 01:04:07,839

these early books about atlantis god

1881

01:04:11,510 --> 01:04:09,920

save us for bringing the term up but the

1882

01:04:12,870 --> 01:04:11,520

whole atlantis thing they've been

1883

01:04:14,950 --> 01:04:12,880

thousands of bucks well that's what

1884

01:04:16,630 --> 01:04:14,960

we're talking about yeah pretty much now

1885

01:04:18,950 --> 01:04:16,640

do i claim there's a lost continent hell

1886

01:04:20,150 --> 01:04:18,960

no does it bother the hell out of some

1887

01:04:22,390 --> 01:04:20,160

of these scientists and some of our

1888

01:04:23,910 --> 01:04:22,400

critics that it may justify all the

1889

01:04:25,990 --> 01:04:23,920

woo-woo folks who claim that there was a

1890

01:04:27,270 --> 01:04:26,000

lost continent you damn right it does

1891

01:04:29,270 --> 01:04:27,280

you know this is the whole point of the

1892

01:04:32,230 --> 01:04:29,280

show our mission is to

1893

01:04:33,829 --> 01:04:32,240

get drunk on scotch find atlantis

1894

01:04:35,430 --> 01:04:33,839

there you go buddy so that that is our

1895

01:04:37,829 --> 01:04:35,440

main mission and we're getting there one

1896

01:04:40,789 --> 01:04:37,839

guest at a time um and speaking of one

1897

01:04:42,069 --> 01:04:40,799

guest at a time i also have uh questions

1898

01:04:43,109 --> 01:04:42,079

that come in through youtube that i try

1899

01:04:44,470 --> 01:04:43,119

and throw it there every now and again

1900

01:04:46,470 --> 01:04:44,480

to be able to continue on the

1901  
01:04:47,670 --> 01:04:46,480  
conversation and sometimes we just spice

1902  
01:04:51,270 --> 01:04:47,680  
it up a bit

1903  
01:04:54,230 --> 01:04:51,280  
uh this is from lee veltman and he asks

1904  
01:04:55,589 --> 01:04:54,240  
what is the most dismissive issue oh and

1905  
01:04:58,470 --> 01:04:55,599  
my wife just sent me a text message

1906  
01:05:00,309 --> 01:04:58,480  
which uh is honey just let you know

1907  
01:05:02,470 --> 01:05:00,319  
those actually appear on screen for

1908  
01:05:05,589 --> 01:05:02,480  
everyone to see and

1909  
01:05:07,750 --> 01:05:05,599  
it actually says no getting drunk

1910  
01:05:09,510 --> 01:05:07,760  
uh because of lord is that me no no

1911  
01:05:12,150 --> 01:05:09,520  
that's for me my wife actually sent me a

1912  
01:05:14,150 --> 01:05:12,160  
text message and it appears on messenger

1913  
01:05:15,109 --> 01:05:14,160

and it scrolled over to your side of the

1914

01:05:17,270 --> 01:05:15,119

screen

1915

01:05:19,910 --> 01:05:17,280

which which actually said you know no

1916

01:05:21,430 --> 01:05:19,920

getting drunk so see i can't see you i

1917

01:05:23,029 --> 01:05:21,440

think i've got it set up a little wrong

1918

01:05:24,230 --> 01:05:23,039

should i be able to see you now no

1919

01:05:25,430 --> 01:05:24,240

because i turned off my camera so that

1920

01:05:28,230 --> 01:05:25,440

it doesn't hurt in the bottom right hand

1921

01:05:30,069 --> 01:05:28,240

corner so um no there will be no getting

1922

01:05:32,309 --> 01:05:30,079

drunk tonight but that is the overall

1923

01:05:33,750 --> 01:05:32,319

arching joke theme

1924

01:05:35,270 --> 01:05:33,760

if she can hear me

1925

01:05:37,670 --> 01:05:35,280

heavy drinking and drinking or not

1926

01:05:39,430 --> 01:05:37,680

necessarily contemporaneous well no i

1927

01:05:41,589 --> 01:05:39,440

understand that it's just the whole you

1928

01:05:43,029 --> 01:05:41,599

know it's the snoring thing you you have

1929

01:05:44,630 --> 01:05:43,039

several scotches

1930

01:05:46,870 --> 01:05:44,640

more than you actually expect to you

1931

01:05:49,670 --> 01:05:46,880

come home you get to get to bed and then

1932

01:05:52,470 --> 01:05:49,680

you start you know i snore like a like a

1933

01:05:55,190 --> 01:05:52,480

velociraptor as it were so i we're

1934

01:05:57,190 --> 01:05:55,200

brothers from another mother my friend

1935

01:05:59,430 --> 01:05:57,200

darn darn straight but again as they say

1936

01:06:00,470 --> 01:05:59,440

happy wife happy life so i i i have to

1937

01:06:02,630 --> 01:06:00,480

keep things in the up and up in the

1938

01:06:05,190 --> 01:06:02,640

street one of my few shortcomings that i

1939

01:06:06,870 --> 01:06:05,200

i'm periodically loud in the evenings i

1940

01:06:09,029 --> 01:06:06,880

know but it's it actually appeared on

1941

01:06:10,150 --> 01:06:09,039

screen so this is now you know on the

1942

01:06:11,349 --> 01:06:10,160

show because

1943

01:06:14,870 --> 01:06:11,359

because

1944

01:06:16,470 --> 01:06:14,880

so now that my wife knows that she has

1945

01:06:18,630 --> 01:06:16,480

this power she can actually comment and

1946

01:06:19,829 --> 01:06:18,640

everyone can see it now so uh honey if

1947

01:06:22,789 --> 01:06:19,839

you're out there and you're listening i

1948

01:06:25,109 --> 01:06:22,799

love you to death and it's okay i i will

1949

01:06:27,349 --> 01:06:25,119

i'll behave i'll be happy saving the

1950

01:06:29,029 --> 01:06:27,359

planet oh i'm saving the planet one one

1951

01:06:31,029 --> 01:06:29,039

scotch class at a time

1952

01:06:33,990 --> 01:06:31,039

um so yeah what is the most

1953

01:06:35,510 --> 01:06:34,000

contemporarrious uh as i mentioned before

1954

01:06:36,870 --> 01:06:35,520

uh and she just said i love you oh i

1955

01:06:37,910 --> 01:06:36,880

love you too honey

1956

01:06:39,029 --> 01:06:37,920

um

1957

01:06:41,349 --> 01:06:39,039

so for all those that are out there

1958

01:06:43,589 --> 01:06:41,359

watching yes my wife is now part of the

1959

01:06:44,710 --> 01:06:43,599

show apparently by text message which

1960

01:06:49,270 --> 01:06:44,720

i'm gonna try and make a thing yeah

1961

01:06:53,750 --> 01:06:51,990

well i'd say i'll give you a

1962

01:06:55,190 --> 01:06:53,760

example of one thing that was they

1963

01:06:58,390 --> 01:06:55,200

thought that they had just

1964

01:06:59,510 --> 01:06:58,400

that that was most damaging okay

1965

01:07:01,270 --> 01:06:59,520

that's i guess a way of getting

1966

01:07:02,390 --> 01:07:01,280

contentiousness at least from our side

1967

01:07:04,870 --> 01:07:02,400

find it very contentious where you're

1968

01:07:06,309 --> 01:07:04,880

like oh my god it's so unfair and then

1969

01:07:11,190 --> 01:07:06,319

then i'll give you another one that's in

1970

01:07:14,150 --> 01:07:11,200

my mind but in 2010 or 11 um a group of

1971

01:07:16,549 --> 01:07:14,160

the the usual suspects certainly by this

1972

01:07:19,270 --> 01:07:16,559

time and at that time is relatively new

1973

01:07:23,029 --> 01:07:19,280

we were you know rock and roll in 2007

1974

01:07:24,789 --> 01:07:23,039

2008 2009 you know there's uh getting

1975

01:07:25,750 --> 01:07:24,799

more and more publicity

1976

01:07:27,910 --> 01:07:25,760

uh

1977

01:07:30,950 --> 01:07:27,920

they did the nova episode the cadillac

1978

01:07:33,190 --> 01:07:30,960

of science tv you know did a wonderful

1979

01:07:35,029 --> 01:07:33,200

one-hour episode there's about six hours

1980

01:07:36,789 --> 01:07:35,039

of international science tv on it

1981

01:07:39,589 --> 01:07:36,799

hundreds of articles

1982

01:07:42,309 --> 01:07:39,599

people start to follow up and etc in in

1983

01:07:43,670 --> 01:07:42,319

uh guy i think it's andrew scott in the

1984

01:07:45,910 --> 01:07:43,680

uk

1985

01:07:49,910 --> 01:07:45,920

and another bunch i've actually got the

1986

01:07:53,349 --> 01:07:49,920

paper here i could probably plug it up

1987

01:07:55,510 --> 01:07:53,359

but did a little three-page screed that

1988

01:07:57,510 --> 01:07:55,520

said the carbon spherules that we were

1989

01:07:59,109 --> 01:07:57,520

claiming you know was one of the impact

1990

01:08:02,549 --> 01:07:59,119

proxy was actually

1991

01:08:04,230 --> 01:08:02,559

bug [\h\_\_\h] and fungus bug [\h\_\_\h] and fungus

1992

01:08:05,109 --> 01:08:04,240

yeah that sounds like a very good punk

1993

01:08:07,029 --> 01:08:05,119

band

1994

01:08:09,430 --> 01:08:07,039

yeah yeah bug [\h\_\_\h] and fungus exactly

1995

01:08:11,109 --> 01:08:09,440

and they pumped us bad

1996

01:08:14,549 --> 01:08:11,119

um

1997

01:08:19,430 --> 01:08:15,430

but

1998

01:08:22,070 --> 01:08:20,870

i'm happy to put it up or you should put

1999

01:08:23,669 --> 01:08:22,080

it up in your links because the

2000

01:08:25,110 --> 01:08:23,679

interesting thing is if i ever sit you

2001  
01:08:26,470 --> 01:08:25,120  
know try to explain to somebody that's

2002  
01:08:28,470 --> 01:08:26,480  
really interested in or read the papers

2003  
01:08:30,070 --> 01:08:28,480  
and stuff let's say read this paper

2004  
01:08:32,950 --> 01:08:30,080  
here's the one one of the ones that

2005  
01:08:35,510 --> 01:08:32,960  
knocked us out of the box a three pager

2006  
01:08:37,829 --> 01:08:35,520  
where they took bugs and fungus took

2007  
01:08:40,070 --> 01:08:37,839  
some selective photos of it and said

2008  
01:08:41,990 --> 01:08:40,080  
this could be misinterpreted as these

2009  
01:08:43,430 --> 01:08:42,000  
vesicular carbon sphericals that they're

2010  
01:08:46,149 --> 01:08:43,440  
finding

2011  
01:08:47,749 --> 01:08:46,159  
okay first of all just as you don't need

2012  
01:08:50,149 --> 01:08:47,759  
to go much further than this in my mind

2013  
01:08:51,910 --> 01:08:50,159

they did it with optical microscopes

2014

01:08:54,070 --> 01:08:51,920

we're sitting there with transmission

2015

01:08:56,870 --> 01:08:54,080

electron microscopes going down if we

2016

01:08:58,390 --> 01:08:56,880

need to all the way to the atomic level

2017

01:09:00,229 --> 01:08:58,400

looking at this stuff with some of the

2018

01:09:02,070 --> 01:09:00,239

most sophisticated instrumentation that

2019

01:09:02,950 --> 01:09:02,080

one could obtain

2020

01:09:05,430 --> 01:09:02,960

okay

2021

01:09:06,950 --> 01:09:05,440

and and they're working with with

2022

01:09:08,470 --> 01:09:06,960

optical microphones that happened later

2023

01:09:11,349 --> 01:09:08,480

again particularly with with todd

2024

01:09:13,110 --> 01:09:11,359

surville's criticism of the the

2025

01:09:15,829 --> 01:09:13,120

of the microspherules

2026

01:09:17,269 --> 01:09:15,839

where we're we're using a a

2027

01:09:22,630 --> 01:09:17,279

a

2028

01:09:24,630 --> 01:09:22,640

meter lens

2029

01:09:26,630 --> 01:09:24,640

and they're they're using a

2030

01:09:27,829 --> 01:09:26,640

binoculars and they're trying to tell us

2031

01:09:29,829 --> 01:09:27,839

what they see and that we're seeing the

2032

01:09:33,349 --> 01:09:29,839

wrong thing and first of all you're not

2033

01:09:34,630 --> 01:09:33,359

going to get people like kenneth and

2034

01:09:37,349 --> 01:09:34,640

you know i'm looking at some of the

2035

01:09:39,030 --> 01:09:37,359

other folks and uh you know uh

2036

01:09:41,749 --> 01:09:39,040

trying to find the ones that are most

2037

01:09:45,590 --> 01:09:41,759

appropriate looking down here

2038

01:09:47,590 --> 01:09:45,600

uh paul miuski peter der pereira robert

2039

01:09:50,149 --> 01:09:47,600

peretta or whatever up there in new york

2040

01:09:52,229 --> 01:09:50,159

uh thomas dora these are geochemists you

2041

01:09:55,350 --> 01:09:52,239

know that are pretty sophisticated folks

2042

01:09:57,750 --> 01:09:55,360

they are not going to misinterpret

2043

01:09:59,990 --> 01:09:57,760

carbon material is being organically

2044

01:10:01,910 --> 01:10:00,000

produced by bugs or fungus from

2045

01:10:03,270 --> 01:10:01,920

something that was produced by high

2046

01:10:05,270 --> 01:10:03,280

temperature

2047

01:10:07,189 --> 01:10:05,280

flames in the in you know high

2048

01:10:09,110 --> 01:10:07,199

temperature intense events

2049

01:10:10,870 --> 01:10:09,120

we're not going to make that mistake but

2050

01:10:12,229 --> 01:10:10,880

then it comes out then the counter

2051  
01:10:13,669 --> 01:10:12,239  
stories come out you can't blame the

2052  
01:10:15,910 --> 01:10:13,679  
press um

2053  
01:10:18,790 --> 01:10:15,920  
any more than they generally are today

2054  
01:10:21,590 --> 01:10:18,800  
they come out series of stories you know

2055  
01:10:23,910 --> 01:10:21,600  
bug poop these guys were wrong bug poop

2056  
01:10:25,830 --> 01:10:23,920  
and it makes it funny it was also very

2057  
01:10:27,830 --> 01:10:25,840  
ingenious you know that they tied us to

2058  
01:10:31,110 --> 01:10:27,840  
something that's funny you know

2059  
01:10:32,790 --> 01:10:31,120  
international you know uh uh intense

2060  
01:10:33,830 --> 01:10:32,800  
interest over

2061  
01:10:35,830 --> 01:10:33,840  
ancient

2062  
01:10:38,630 --> 01:10:35,840  
impact turns out to be driven by

2063  
01:10:40,310 --> 01:10:38,640

misidentified bug [\h\_\_\h]

2064

01:10:42,470 --> 01:10:40,320

well you can just imagine where you just

2065

01:10:45,189 --> 01:10:42,480

want to pull your hair out

2066

01:10:46,790 --> 01:10:45,199

so that we didn't miss oh you know uh

2067

01:10:48,709 --> 01:10:46,800

it's funny yeah absolutely i'll give you

2068

01:10:50,630 --> 01:10:48,719

a good one ted bunch you know he used to

2069

01:10:52,550 --> 01:10:50,640

be head of astrobiology there at nasa or

2070

01:10:55,910 --> 01:10:52,560

something like that but he's also damn

2071

01:10:57,750 --> 01:10:55,920

it he was there with with the shoemaker

2072

01:10:59,590 --> 01:10:57,760

uh you know when they were proving that

2073

01:11:01,750 --> 01:10:59,600

these things happened in the early 60s

2074

01:11:04,229 --> 01:11:01,760

ted continues to publish with us

2075

01:11:06,229 --> 01:11:04,239

he's 78 years old i hope i didn't give

2076

01:11:08,630 --> 01:11:06,239

him an extra year or two he's got twin

2077

01:11:11,270 --> 01:11:08,640

girls that i think are 15. he's fit as a

2078

01:11:14,950 --> 01:11:11,280

fiddle one of the smartest men i know a

2079

01:11:18,070 --> 01:11:14,960

wonderful person has a history with nasa

2080

01:11:19,510 --> 01:11:18,080

and impact research and particularly

2081

01:11:22,070 --> 01:11:19,520

the

2082

01:11:23,669 --> 01:11:22,080

microscopy of impact research looking at

2083

01:11:25,189 --> 01:11:23,679

tiny things to tell what happened on the

2084

01:11:26,709 --> 01:11:25,199

big scale

2085

01:11:28,470 --> 01:11:26,719

and to say that ted missed something

2086

01:11:30,630 --> 01:11:28,480

like this and it was actually bug [h\_\_\h]

2087

01:11:31,669 --> 01:11:30,640

it's just an insult and they've got to

2088

01:11:35,830 --> 01:11:31,679

know that

2089

01:11:37,990 --> 01:11:35,840

but but it it makes good slap back

2090

01:11:39,910 --> 01:11:38,000

science the problem with this stuff is

2091

01:11:41,910 --> 01:11:39,920

you don't get another turn it's human

2092

01:11:43,189 --> 01:11:41,920

nature and it's the nature of the press

2093

01:11:45,510 --> 01:11:43,199

not that it's all been completely

2094

01:11:47,510 --> 01:11:45,520

suppressed and is all over anything and

2095

01:11:49,790 --> 01:11:47,520

not that don't swing back and forth but

2096

01:11:52,470 --> 01:11:49,800

it definitely the

2097

01:11:55,030 --> 01:11:52,480

2010-2011 period where particularly in

2098

01:11:57,669 --> 01:11:55,040

2011 they published

2099

01:12:00,310 --> 01:11:57,679

the younger driest impact hypothesis

2100

01:12:02,950 --> 01:12:00,320

colon a requiem

2101  
01:12:04,630 --> 01:12:02,960  
a requirement i heard that and that was

2102  
01:12:07,189 --> 01:12:04,640  
that was also

2103  
01:12:08,550 --> 01:12:07,199  
slapped back with a

2104  
01:12:09,910 --> 01:12:08,560  
with further

2105  
01:12:11,990 --> 01:12:09,920  
uh oh

2106  
01:12:14,390 --> 01:12:12,000  
well like like again if i'm not mistaken

2107  
01:12:16,790 --> 01:12:14,400  
like that came out and then uh

2108  
01:12:19,110 --> 01:12:16,800  
randall and and uh graham went back on

2109  
01:12:20,470 --> 01:12:19,120  
joe rogan and they tore that to pieces

2110  
01:12:23,590 --> 01:12:20,480  
and pretty much anybody who's under the

2111  
01:12:25,830 --> 01:12:23,600  
age of 50 who watch that show is

2112  
01:12:27,590 --> 01:12:25,840  
you know like to the scientists they're

2113  
01:12:29,510 --> 01:12:27,600

going to like they're they're they're

2114

01:12:31,510 --> 01:12:29,520

going towards the scientists their

2115

01:12:33,189 --> 01:12:31,520

target audience is the scientists if

2116

01:12:34,630 --> 01:12:33,199

you're focusing at the mainstream if

2117

01:12:36,229 --> 01:12:34,640

you're focusing to the to your average

2118

01:12:38,390 --> 01:12:36,239

regular person you'll piss off the

2119

01:12:40,229 --> 01:12:38,400

scientists but at the end of the day

2120

01:12:42,630 --> 01:12:40,239

you're going to actually

2121

01:12:43,990 --> 01:12:42,640

uh focus on what is most important which

2122

01:12:45,830 --> 01:12:44,000

is getting the regular people to

2123

01:12:47,990 --> 01:12:45,840

basically say the scientists who are

2124

01:12:50,550 --> 01:12:48,000

saying well no it's bug [h\_\_h] that it

2125

01:12:52,790 --> 01:12:50,560

makes them less credible in everyone

2126

01:12:54,390 --> 01:12:52,800

else's eyes if their only desires to be

2127

01:12:56,070 --> 01:12:54,400

credible within their own field and

2128

01:12:57,750 --> 01:12:56,080

that's their only care

2129

01:12:59,350 --> 01:12:57,760

and they need to know it's like well the

2130

01:13:01,350 --> 01:12:59,360

rest of them the rest of the world is

2131

01:13:02,229 --> 01:13:01,360

laughing at you and thinks you're full

2132

01:13:03,990 --> 01:13:02,239

of [h\_\_\h]

2133

01:13:06,709 --> 01:13:04,000

so it doesn't matter right you know i

2134

01:13:08,790 --> 01:13:06,719

didn't think that was the path again

2135

01:13:11,030 --> 01:13:08,800

i was naive and for somebody who worked

2136

01:13:12,950 --> 01:13:11,040

for six years in hardball politics and

2137

01:13:14,630 --> 01:13:12,960

we were in a particularly hardball brand

2138

01:13:16,390 --> 01:13:14,640

involved in white water and all sorts of

2139

01:13:18,070 --> 01:13:16,400

other stuff right

2140

01:13:20,390 --> 01:13:18,080

that was a pretty good cynic when i was

2141

01:13:22,310 --> 01:13:20,400

30 years old by the time this stuff it

2142

01:13:24,950 --> 01:13:22,320

all happened i was 40 it brought me to a

2143

01:13:26,950 --> 01:13:24,960

new depth and i had thought that when we

2144

01:13:28,709 --> 01:13:26,960

did this stuff in seven eight nine and

2145

01:13:31,510 --> 01:13:28,719

10 that you didn't need the public that

2146

01:13:33,669 --> 01:13:31,520

the scientific method would work and it

2147

01:13:35,669 --> 01:13:33,679

would prevail and i wanted public

2148

01:13:37,030 --> 01:13:35,679

interest everybody likes public interest

2149

01:13:40,070 --> 01:13:37,040

but i didn't think that was going to be

2150

01:13:43,590 --> 01:13:40,080

necessary to turn it that good science

2151  
01:13:44,870 --> 01:13:43,600  
good analytics good publications would

2152  
01:13:47,910 --> 01:13:44,880  
win the day

2153  
01:13:50,310 --> 01:13:47,920  
and whoo was i wrong you know and that's

2154  
01:13:52,390 --> 01:13:50,320  
when i went the direction personally for

2155  
01:13:55,830 --> 01:13:52,400  
what that's worth that you're speaking

2156  
01:13:58,390 --> 01:13:55,840  
of right now that it is going to require

2157  
01:13:59,270 --> 01:13:58,400  
such an intense public interest

2158  
01:14:01,189 --> 01:13:59,280  
that

2159  
01:14:03,270 --> 01:14:01,199  
they have got to get a better game on

2160  
01:14:05,510 --> 01:14:03,280  
because you can't put it away and that's

2161  
01:14:06,709 --> 01:14:05,520  
why randall carlson like for instance

2162  
01:14:07,990 --> 01:14:06,719  
and i hate to say this even though i

2163  
01:14:10,070 --> 01:14:08,000

loved his book

2164

01:14:11,430 --> 01:14:10,080

uh you know fingerprints in the original

2165

01:14:12,630 --> 01:14:11,440

book and when i read that it was

2166

01:14:14,229 --> 01:14:12,640

probably

2167

01:14:16,070 --> 01:14:14,239

i was into this for a year or two the

2168

01:14:17,830 --> 01:14:16,080

book was a year too old i read

2169

01:14:19,990 --> 01:14:17,840

fingerprints and i just was tearing my

2170

01:14:22,229 --> 01:14:20,000

hair out going oh my gosh he's almost

2171

01:14:25,350 --> 01:14:22,239

there this guy is

2172

01:14:27,110 --> 01:14:25,360

interpolating from oral traditions and

2173

01:14:29,830 --> 01:14:27,120

other

2174

01:14:33,270 --> 01:14:29,840

non-standard non-analytical evidence

2175

01:14:35,590 --> 01:14:33,280

that something the hell happened 13 000

2176

01:14:37,189 --> 01:14:35,600

years ago exactly and there i was just

2177

01:14:39,750 --> 01:14:37,199

becoming involved

2178

01:14:41,590 --> 01:14:39,760

in a body of analytical science that

2179

01:14:43,270 --> 01:14:41,600

said yeah we're finding evidence

2180

01:14:44,950 --> 01:14:43,280

something happened 13 000 years ago so i

2181

01:14:48,470 --> 01:14:44,960

was like oh my god graham hancock he

2182

01:14:49,910 --> 01:14:48,480

just i wish he would get on this and

2183

01:14:51,669 --> 01:14:49,920

he did about five years ago and you

2184

01:14:54,470 --> 01:14:51,679

could see it coming and i just cheered

2185

01:14:55,830 --> 01:14:54,480

it and i wouldn't what my point is that

2186

01:14:58,229 --> 01:14:55,840

i wouldn't have thought that a graham

2187

01:15:01,270 --> 01:14:58,239

hancock would have been helpful in 2007

2188

01:15:03,270 --> 01:15:01,280

or 2008. had graham come out right then

2189

01:15:05,510 --> 01:15:03,280

and done a book or whatnot would have

2190

01:15:07,830 --> 01:15:05,520

said oh my gosh you know it's the the

2191

01:15:09,590 --> 01:15:07,840

god bless him but it that's the woo-woo

2192

01:15:11,189 --> 01:15:09,600

side we don't need help from the woo-woo

2193

01:15:13,590 --> 01:15:11,199

side we're going to win this in the in

2194

01:15:14,390 --> 01:15:13,600

the in the publications well that's all

2195

01:15:16,630 --> 01:15:14,400

over

2196

01:15:18,630 --> 01:15:16,640

we need the graham hancocks this world

2197

01:15:20,149 --> 01:15:18,640

he has become a friend of mine uh a

2198

01:15:21,750 --> 01:15:20,159

digital acquaintance mostly but i've met

2199

01:15:23,510 --> 01:15:21,760

him in person as well look forward to

2200

01:15:24,950 --> 01:15:23,520

seeing him again hopefully sometime

2201

01:15:28,709 --> 01:15:24,960

relatively soon

2202

01:15:31,110 --> 01:15:28,719

um and and graham and randall's work is

2203

01:15:32,870 --> 01:15:31,120

absolutely critical to us now and your

2204

01:15:34,709 --> 01:15:32,880

work sir

2205

01:15:36,470 --> 01:15:34,719

that putting it out in the public's

2206

01:15:39,110 --> 01:15:36,480

imagination is where we have to go with

2207

01:15:40,870 --> 01:15:39,120

it now putting me in the same breath as

2208

01:15:42,950 --> 01:15:40,880

as graeme hancock and randall carlson

2209

01:15:44,870 --> 01:15:42,960

and like i i look up to those guys like

2210

01:15:48,070 --> 01:15:44,880

randall's a fellow brother he's also you

2211

01:15:50,149 --> 01:15:48,080

know a freemason and that's yeah yeah

2212

01:15:52,070 --> 01:15:50,159

um to you know the you got the whole

2213

01:15:53,669 --> 01:15:52,080

fraternity thing but at the same time

2214

01:15:55,430 --> 01:15:53,679

it's like his work has been so

2215

01:15:56,870 --> 01:15:55,440

influential in terms of me actually

2216

01:15:59,110 --> 01:15:56,880

starting the show

2217

01:16:00,950 --> 01:15:59,120

in the first place and same thing with

2218

01:16:02,229 --> 01:16:00,960

graham because it's like if i hadn't

2219

01:16:03,590 --> 01:16:02,239

said okay well i want to be able to talk

2220

01:16:05,350 --> 01:16:03,600

to as many interesting people as

2221

01:16:06,870 --> 01:16:05,360

possible because i've got some crazy

2222

01:16:08,950 --> 01:16:06,880

wild ideas myself

2223

01:16:10,630 --> 01:16:08,960

and you know it's like okay well

2224

01:16:12,790 --> 01:16:10,640

this is something fun to do at the same

2225

01:16:14,070 --> 01:16:12,800

time i just love learning cool [h\_\_\h] and

2226

01:16:17,430 --> 01:16:14,080

i believe that other people have a right

2227

01:16:19,669 --> 01:16:17,440

to people to know it and being able to

2228

01:16:22,790 --> 01:16:19,679

um

2229

01:16:25,510 --> 01:16:22,800

be able to describe

2230

01:16:27,990 --> 01:16:25,520

the importance of

2231

01:16:30,070 --> 01:16:28,000

other people having this knowledge or or

2232

01:16:31,110 --> 01:16:30,080

being able to chew it over in their own

2233

01:16:31,990 --> 01:16:31,120

minds

2234

01:16:32,950 --> 01:16:32,000

is

2235

01:16:34,310 --> 01:16:32,960

something

2236

01:16:38,390 --> 01:16:34,320

you know like you you can't you can't

2237

01:16:40,790 --> 01:16:38,400

hold it you can't uh keep this out of

2238

01:16:42,870 --> 01:16:40,800

people's genes out of the bottle yeah

2239

01:16:45,430 --> 01:16:42,880

you can't hide it you can't surprise it

2240

01:16:47,030 --> 01:16:45,440

it's it's not disgusting exactly well it

2241

01:16:49,110 --> 01:16:47,040

was a product it was been a part of

2242

01:16:51,350 --> 01:16:49,120

cultural both religious tradition you

2243

01:16:54,630 --> 01:16:51,360

know in other cultures as well as

2244

01:16:55,590 --> 01:16:54,640

christian tradition it was also a a part

2245

01:16:56,470 --> 01:16:55,600

of

2246

01:16:58,870 --> 01:16:56,480

uh

2247

01:17:01,510 --> 01:16:58,880

you know speculative science in the in

2248

01:17:03,350 --> 01:17:01,520

the uh 20th century with velikovsky god

2249

01:17:05,189 --> 01:17:03,360

knows don't mention dr v or you know you

2250

01:17:07,189 --> 01:17:05,199

get knocked out of the box right there

2251

01:17:09,030 --> 01:17:07,199

but he was on to something

2252

01:17:12,470 --> 01:17:09,040

you're familiar with him right or aware

2253

01:17:14,630 --> 01:17:12,480

of him and he was absolutely destroyed i

2254

01:17:16,950 --> 01:17:14,640

mean literally picked apart by carl

2255

01:17:18,470 --> 01:17:16,960

sagan and sagan had the potential to be

2256

01:17:20,790 --> 01:17:18,480

a tremendous advocate for this and he

2257

01:17:22,870 --> 01:17:20,800

actually contributed to it significantly

2258

01:17:25,510 --> 01:17:22,880

in doing things like describing the

2259

01:17:27,669 --> 01:17:25,520

origin of the swastika as being from a

2260

01:17:29,030 --> 01:17:27,679

rotating comet

2261

01:17:31,110 --> 01:17:29,040

huh

2262

01:17:32,790 --> 01:17:31,120

oh yeah look that one up that's a great

2263

01:17:36,149 --> 01:17:32,800

rat hole it's been a while

2264

01:17:38,790 --> 01:17:36,159  
since absolutely it's been a while

2265

01:17:40,229 --> 01:17:38,800  
but but v took it so damn far and did it

2266

01:17:41,910 --> 01:17:40,239  
all for moral condition had no

2267

01:17:44,630 --> 01:17:41,920  
analytical evidence

2268

01:17:47,350 --> 01:17:44,640  
you know and was a kind of a you know a

2269

01:17:50,149 --> 01:17:47,360  
a target rich personality

2270

01:17:52,149 --> 01:17:50,159  
that uh that that sagan went against him

2271

01:17:54,709 --> 01:17:52,159  
and that also was you know shut

2272

01:17:55,990 --> 01:17:54,719  
everything down to alvarez

2273

01:17:58,790 --> 01:17:56,000  
and that's one of the reasons they had

2274

01:18:00,550 --> 01:17:58,800  
such a tough fight even though it wasn't

2275

01:18:02,149 --> 01:18:00,560  
within historical times or near

2276

01:18:03,030 --> 01:18:02,159

historical times

2277

01:18:05,990 --> 01:18:03,040

um

2278

01:18:07,830 --> 01:18:06,000

like uh like velikovsky had claimed

2279

01:18:09,669 --> 01:18:07,840

but but just even mentioning that you

2280

01:18:11,189 --> 01:18:09,679

could you know provide any support to

2281

01:18:13,910 --> 01:18:11,199

velikovsky or

2282

01:18:16,470 --> 01:18:13,920

donnely or hell william whiston you

2283

01:18:18,790 --> 01:18:16,480

know who's a predecessor and cohort of

2284

01:18:21,990 --> 01:18:18,800

of of newton's is absolutely convinced

2285

01:18:24,470 --> 01:18:22,000

that ancient comet had influenced the

2286

01:18:27,270 --> 01:18:24,480

the planet's uh cultures in the past

2287

01:18:29,110 --> 01:18:27,280

uh providing any support to that body of

2288

01:18:30,630 --> 01:18:29,120

of of thinking over the last four or

2289

01:18:32,310 --> 01:18:30,640

five hundred years not to mention you

2290

01:18:34,550 --> 01:18:32,320

know all the way out to plateau

2291

01:18:38,390 --> 01:18:34,560

it was just verboten

2292

01:18:42,470 --> 01:18:38,400

and um and you know we've reaped uh

2293

01:18:42,480 --> 01:18:46,310

oh i'm i'm okay

2294

01:18:50,229 --> 01:18:48,550

i was just coughing

2295

01:18:51,669 --> 01:18:50,239

this vape is pretty strong and some oh

2296

01:18:53,030 --> 01:18:51,679

man

2297

01:18:55,669 --> 01:18:53,040

wrong tube get one of these over the

2298

01:18:57,189 --> 01:18:55,679

counter ones no i i i rj

2299

01:18:59,030 --> 01:18:57,199

salem north carolina i don't even think

2300

01:19:00,149 --> 01:18:59,040

we have that here

2301

01:19:01,669 --> 01:19:00,159

um

2302

01:19:04,390 --> 01:19:01,679

what was i gonna go before i started

2303

01:19:05,430 --> 01:19:04,400

almost caught my lungs out um

2304

01:19:06,830 --> 01:19:05,440

you let me know when you want to see

2305

01:19:08,790 --> 01:19:06,840

some weird

2306

01:19:10,070 --> 01:19:08,800

pictures [h\_\_h] it let's see some more

2307

01:19:11,110 --> 01:19:10,080

pictures

2308

01:19:12,550 --> 01:19:11,120

let's go

2309

01:19:13,830 --> 01:19:12,560

well this is not how i thought it'd play

2310

01:19:15,590 --> 01:19:13,840

out i guess we've been talking for more

2311

01:19:17,270 --> 01:19:15,600

than an hour which is great because i

2312

01:19:19,110 --> 01:19:17,280

was so nervous about the power points

2313

01:19:21,189 --> 01:19:19,120

now i don't know exactly how we'd want

2314

01:19:22,709 --> 01:19:21,199

to do this do we want to do a yd

2315

01:19:25,110 --> 01:19:22,719

powerpoint to introduce people that

2316

01:19:26,709 --> 01:19:25,120

might not be familiar with the basics of

2317

01:19:28,709 --> 01:19:26,719

it you want to jump into carolina bay's

2318

01:19:31,030 --> 01:19:28,719

which is better eye candy maybe well you

2319

01:19:33,350 --> 01:19:31,040

know let's just i'm going to let you

2320

01:19:34,790 --> 01:19:33,360

picture it i've got my my square square

2321

01:19:37,990 --> 01:19:34,800

box my image

2322

01:19:39,189 --> 01:19:38,000

uh which is now in a much uh much lower

2323

01:19:41,510 --> 01:19:39,199

let's see if we can pull it off

2324

01:19:43,990 --> 01:19:41,520

technically first for our guests and not

2325

01:19:46,149 --> 01:19:44,000

have them hang up and uh disconnect so

2326

01:19:47,910 --> 01:19:46,159

please don't disconnect in fact can you

2327

01:19:49,990 --> 01:19:47,920

see that plea please do go to

2328

01:19:51,270 --> 01:19:50,000

patreon.com

2329

01:19:52,390 --> 01:19:51,280

the show

2330

01:19:54,310 --> 01:19:52,400

if we can actually up to a certain

2331

01:19:55,750 --> 01:19:54,320

amount i can actually hire somebody to

2332

01:19:58,390 --> 01:19:55,760

take care of the production for me so i

2333

01:20:01,030 --> 01:19:58,400

can focus on the interviews or today

2334

01:20:03,430 --> 01:20:01,040

it's funny just just send your your cv

2335

01:20:08,390 --> 01:20:03,440

into info denver.com

2336

01:20:09,590 --> 01:20:08,400

and uh join our intern contest

2337

01:20:11,830 --> 01:20:09,600

get us caught

2338

01:20:13,910 --> 01:20:11,840

where you can win uh a chance to get me

2339

01:20:15,590 --> 01:20:13,920

coffee on a daily basis whenever we do a

2340

01:20:18,070 --> 01:20:15,600

show think about that ladies and

2341

01:20:19,030 --> 01:20:18,080

gentlemen info denive.com send in your

2342

01:20:20,229 --> 01:20:19,040

cv

2343

01:20:21,830 --> 01:20:20,239

and we will

2344

01:20:23,189 --> 01:20:21,840

get you on as a as the official dental

2345

01:20:24,470 --> 01:20:23,199

floor intern

2346

01:20:26,550 --> 01:20:24,480

so you can share your screen i've got

2347

01:20:29,110 --> 01:20:26,560

you i've got you on the big screen now

2348

01:20:31,270 --> 01:20:29,120

so uh you see my first slide i cannot

2349

01:20:33,110 --> 01:20:31,280

see your first slide i can see your uh

2350

01:20:34,070 --> 01:20:33,120

uh am i not sharing no you're not

2351  
01:20:37,830 --> 01:20:34,080  
sharing

2352  
01:20:44,950 --> 01:20:40,470  
can you still see me i can still see you

2353  
01:20:51,030 --> 01:20:44,960  
okay i love the informality um

2354  
01:20:53,910 --> 01:20:52,390  
yes i can

2355  
01:20:55,030 --> 01:20:53,920  
okay

2356  
01:20:57,750 --> 01:20:55,040  
there we go

2357  
01:21:01,430 --> 01:20:59,590  
now i'd like to say that my power points

2358  
01:21:03,270 --> 01:21:01,440  
are such that i could you know do the

2359  
01:21:05,350 --> 01:21:03,280  
formatting in the initial slides here

2360  
01:21:08,950 --> 01:21:05,360  
the first two thirds of it

2361  
01:21:10,470 --> 01:21:08,960  
uh but uh i worked a little bit on it uh

2362  
01:21:13,189 --> 01:21:10,480  
but most of this comes out of the group

2363  
01:21:14,870 --> 01:21:13,199

this is a standard presentation um i

2364

01:21:17,110 --> 01:21:14,880

mean it probably hasn't been given 20 30

2365

01:21:19,110 --> 01:21:17,120

times but but we share it amongst

2366

01:21:20,709 --> 01:21:19,120

ourselves okay

2367

01:21:22,709 --> 01:21:20,719

um

2368

01:21:24,950 --> 01:21:22,719

or amongst ourselves to give if somebody

2369

01:21:26,229 --> 01:21:24,960

needs to go talk i've given it once or

2370

01:21:29,350 --> 01:21:26,239

twice

2371

01:21:32,229 --> 01:21:29,360

to nc state uh astronomy club once and

2372

01:21:34,870 --> 01:21:32,239

also to nc state here in raleigh uh like

2373

01:21:37,110 --> 01:21:34,880

uh uh older folks interested in science

2374

01:21:38,709 --> 01:21:37,120

stuff club okay diamonds comments and

2375

01:21:40,310 --> 01:21:38,719

mammoths that's kind of the original

2376

01:21:42,070 --> 01:21:40,320

team there

2377

01:21:43,430 --> 01:21:42,080

and i hope you'll put a link to it or

2378

01:21:44,630 --> 01:21:43,440

we'll otherwise put it up later if

2379

01:21:46,790 --> 01:21:44,640

people want to check on some of those

2380

01:21:50,149 --> 01:21:46,800

people all of them are googleable and as

2381

01:21:51,990 --> 01:21:50,159

i say that's 23 phds in me

2382

01:21:52,790 --> 01:21:52,000

uh happy to be along there as the bat

2383

01:21:54,870 --> 01:21:52,800

boy

2384

01:21:56,790 --> 01:21:54,880

and you've got alan west who i've

2385

01:21:58,550 --> 01:21:56,800

mentioned ted bunch of nasa

2386

01:22:00,629 --> 01:21:58,560

james whittke you know wonderful

2387

01:22:03,110 --> 01:22:00,639

researcher out at university arizona al

2388

01:22:04,950 --> 01:22:03,120

good you're a fascinating cat man i'm

2389

01:22:06,790 --> 01:22:04,960

sure you've heard of him who if he

2390

01:22:08,870 --> 01:22:06,800

didn't have enough trouble on his hands

2391

01:22:11,430 --> 01:22:08,880

claiming that the topper site in south

2392

01:22:13,910 --> 01:22:11,440

carolina might have lithic debris that

2393

01:22:16,550 --> 01:22:13,920

dates back 50 000 years

2394

01:22:17,990 --> 01:22:16,560

he invited more trouble okay when he

2395

01:22:19,669 --> 01:22:18,000

signed on to this but that's because

2396

01:22:21,590 --> 01:22:19,679

he's a you know got a lot of integrity

2397

01:22:23,030 --> 01:22:21,600

jim kennett who we've mentioned doug

2398

01:22:24,470 --> 01:22:23,040

kenneth his son

2399

01:22:25,750 --> 01:22:24,480

you gotta you gotta believe in something

2400

01:22:27,990 --> 01:22:25,760

if you get your son involved with it

2401

01:22:30,470 --> 01:22:28,000

he's just beginning his career uh jim

2402

01:22:32,470 --> 01:22:30,480

kenneth paid the paleolithium son doug

2403

01:22:34,470 --> 01:22:32,480

was particularly helpful uh particularly

2404

01:22:35,590 --> 01:22:34,480

early on uh doesn't have as much time

2405

01:22:37,910 --> 01:22:35,600

for it now

2406

01:22:40,470 --> 01:22:37,920

um but as an anthropologist and he got

2407

01:22:43,990 --> 01:22:40,480

firestone luanne becker another cosmic

2408

01:22:46,629 --> 01:22:44,000

geochemist pete schultz big win there

2409

01:22:49,510 --> 01:22:46,639

you know nasa guy runs the big gun you

2410

01:22:51,510 --> 01:22:49,520

know the the the impact uh

2411

01:22:53,830 --> 01:22:51,520

reproduction gun at the nasa ames center

2412

01:22:55,750 --> 01:22:53,840

bob pereira i think is a geochemist on

2413

01:22:58,070 --> 01:22:55,760

and on and on john erlinson

2414

01:23:00,870 --> 01:22:58,080

anthropologists there at uh one of the

2415

01:23:03,030 --> 01:23:00,880

california institutions i could i could

2416

01:23:05,750 --> 01:23:03,040

keep going but these are serious people

2417

01:23:07,669 --> 01:23:05,760

going deeper in their paul majewski you

2418

01:23:09,910 --> 01:23:07,679

know collected some samples for us and

2419

01:23:11,830 --> 01:23:09,920

has been on some papers um in greenland

2420

01:23:13,510 --> 01:23:11,840

hell he's had a whole 60 minutes on him

2421

01:23:16,070 --> 01:23:13,520

before okay

2422

01:23:18,790 --> 01:23:16,080

malcolm lacomp there is a is truly a

2423

01:23:20,229 --> 01:23:18,800

rocket scientist and a close personal

2424

01:23:22,950 --> 01:23:20,239

friend i've traveled to jordan with him

2425

01:23:24,950 --> 01:23:22,960

on an archaeological dig uh another punk

2426

01:23:27,189 --> 01:23:24,960

like me it's not 23 and not me david

2427

01:23:28,470 --> 01:23:27,199

kimball was not a phd and was a good

2428

01:23:31,030 --> 01:23:28,480

buddy he loved the days here in north

2429

01:23:32,870 --> 01:23:31,040

carolina on and on wendy wohlbach at the

2430

01:23:35,110 --> 01:23:32,880

end

2431

01:23:37,430 --> 01:23:35,120

she is the number one expert in burned

2432

01:23:38,790 --> 01:23:37,440

stuff

2433

01:23:40,390 --> 01:23:38,800

of soot

2434

01:23:42,550 --> 01:23:40,400

yeah that's a

2435

01:23:43,910 --> 01:23:42,560

subject that is awesome she actually

2436

01:23:46,390 --> 01:23:43,920

said this event i just heard this

2437

01:23:47,990 --> 01:23:46,400

yesterday uh second hand from her she

2438

01:23:50,470 --> 01:23:48,000

said on this next paper we have coming

2439

01:23:53,669 --> 01:23:50,480

out blockbuster paper coming up

2440

01:23:56,149 --> 01:23:53,679

on the burning events um she said the

2441

01:23:59,189 --> 01:23:56,159

burn that the the

2442

01:24:00,629 --> 01:23:59,199

obfuscation of light from above was so

2443

01:24:02,229 --> 01:24:00,639

complete that it would have been near

2444

01:24:07,910 --> 01:24:02,239

100

2445

01:24:11,270 --> 01:24:07,920

much black carbon and and material was

2446

01:24:12,149 --> 01:24:11,280

was launched from the fires

2447

01:24:13,510 --> 01:24:12,159

uh

2448

01:24:16,070 --> 01:24:13,520

okay

2449

01:24:17,990 --> 01:24:16,080

the three ice age anomalies

2450

01:24:19,189 --> 01:24:18,000

you know anomalies are instructive when

2451

01:24:20,790 --> 01:24:19,199

you find something that doesn't make

2452

01:24:22,470 --> 01:24:20,800

sense and you can figure out the answer

2453

01:24:24,790 --> 01:24:22,480

you're going to learn something

2454

01:24:26,390 --> 01:24:24,800

one is the megaphone extinction fancy

2455

01:24:28,390 --> 01:24:26,400

word for saying those big beasts that

2456

01:24:29,910 --> 01:24:28,400

roamed across north america so many

2457

01:24:31,910 --> 01:24:29,920

years ago and we'll see more about them

2458

01:24:34,070 --> 01:24:31,920

sending tens of millions of animals

2459

01:24:36,790 --> 01:24:34,080

suddenly when it stinked

2460

01:24:41,510 --> 01:24:36,800

only event and more than 300 3.5 million

2461

01:24:43,590 --> 01:24:41,520

years of of that kind of magnitude

2462

01:24:46,229 --> 01:24:43,600

and it did not happen instantly we often

2463

01:24:47,910 --> 01:24:46,239

get criticized that this is or people

2464

01:24:49,669 --> 01:24:47,920

laugh and say oh yeah it fraud all the

2465

01:24:51,669 --> 01:24:49,679

ma'am essentially yeah it was a bad bad

2466

01:24:53,430 --> 01:24:51,679

day there's no question that there were

2467

01:24:55,430 --> 01:24:53,440

a lot of survivors it was just whether

2468

01:24:57,590 --> 01:24:55,440

they could keep their

2469

01:24:59,669 --> 01:24:57,600

you know their ecosystem and you know

2470

01:25:01,750 --> 01:24:59,679

get their their life away is humming

2471

01:25:02,870 --> 01:25:01,760

after that a lot of them failed so you

2472

01:25:04,629 --> 01:25:02,880

got the megaphone extinctions

2473

01:25:06,550 --> 01:25:04,639

unexplained the return of the ice age

2474

01:25:08,870 --> 01:25:06,560

during the younger driest is unexplained

2475

01:25:11,030 --> 01:25:08,880

why did it go from a warming period that

2476

01:25:12,470 --> 01:25:11,040

was actually i've heard

2477

01:25:14,870 --> 01:25:12,480

even though there was a giant ice sheet

2478

01:25:17,830 --> 01:25:14,880

slightly warmer than it is today

2479

01:25:20,390 --> 01:25:17,840

then uh even with a two mile

2480

01:25:22,470 --> 01:25:20,400

tall ice sheet just north of chicago

2481

01:25:23,990 --> 01:25:22,480

maybe over chicago dropped tennessee

2482

01:25:25,590 --> 01:25:24,000

there suddenly

2483

01:25:27,350 --> 01:25:25,600

um

2484

01:25:29,830 --> 01:25:27,360

and the only such interglacial event

2485

01:25:32,149 --> 01:25:29,840

there in two million years

2486

01:25:33,830 --> 01:25:32,159

excuse me a very sudden cold snap

2487

01:25:35,350 --> 01:25:33,840

and then the sudden major adaption of

2488

01:25:37,110 --> 01:25:35,360

the very first north american

2489

01:25:39,510 --> 01:25:37,120

paleo-indian culture

2490

01:25:42,229 --> 01:25:39,520

uh well let's not say the very first but

2491

01:25:43,669 --> 01:25:42,239

the most accepted and uh widely regarded

2492

01:25:45,430 --> 01:25:43,679

and studied culture even though it's

2493

01:25:47,830 --> 01:25:45,440

tremendously controversial

2494

01:25:49,910 --> 01:25:47,840

uh the clovis culture what happened to

2495

01:25:53,030 --> 01:25:49,920

them so you got three things that were

2496

01:25:55,110 --> 01:25:53,040

that are unanswered despite a tremendous

2497

01:25:57,590 --> 01:25:55,120

amount of research time being put into

2498

01:25:59,990 --> 01:25:57,600

each of them

2499

01:26:01,830 --> 01:26:00,000

all around 12 000 years ago the question

2500

01:26:04,229 --> 01:26:01,840

is that coincidental are those three

2501

01:26:06,149 --> 01:26:04,239

things related

2502

01:26:07,830 --> 01:26:06,159

we propose that the answer that is yeah

2503

01:26:08,950 --> 01:26:07,840

they are related and that was an et

2504

01:26:10,870 --> 01:26:08,960

impact

2505

01:26:12,790 --> 01:26:10,880

so why should you care i think your

2506

01:26:15,910 --> 01:26:12,800

audience knows pretty well

2507

01:26:17,910 --> 01:26:15,920

uh more will hit us in the future uh

2508

01:26:20,229 --> 01:26:17,920

they can change climate rapidly which is

2509

01:26:22,790 --> 01:26:20,239

obviously a big subject today

2510

01:26:24,629 --> 01:26:22,800

for reasons uh that that we're giving

2511

01:26:26,470 --> 01:26:24,639

you know different causes for they can

2512

01:26:28,310 --> 01:26:26,480

cause mega tsunamis a particular

2513

01:26:30,229 --> 01:26:28,320

interest of mine that i find fascinating

2514

01:26:31,830 --> 01:26:30,239

and extinctions could happen including

2515

01:26:33,030 --> 01:26:31,840

hours

2516

01:26:35,590 --> 01:26:33,040

now

2517

01:26:37,830 --> 01:26:35,600

all this said i focus on the past i'm

2518

01:26:39,350 --> 01:26:37,840

not a repent now i don't study this so

2519

01:26:41,510 --> 01:26:39,360

that we can save ourselves in the future

2520

01:26:43,110 --> 01:26:41,520

necessarily but more out of interest in

2521

01:26:45,430 --> 01:26:43,120

what happened in the past

2522

01:26:47,270 --> 01:26:45,440

and uh small impacts could obliterate a

2523

01:26:49,030 --> 01:26:47,280

city and we saw that at chelsea just a

2524

01:26:53,110 --> 01:26:49,040

couple years ago the mammoths couldn't

2525

01:26:57,510 --> 01:26:54,870

so the anomaly of the extinctions let's

2526

01:26:58,790 --> 01:26:57,520

take a look at it um

2527

01:27:00,629 --> 01:26:58,800

it was all in north america twelve

2528

01:27:02,310 --> 01:27:00,639

thousand uh nine hundred years ago all

2529

01:27:04,470 --> 01:27:02,320

of these beasts were here

2530

01:27:06,790 --> 01:27:04,480

none are here today um

2531

01:27:08,870 --> 01:27:06,800

it was unusual many have been around for

2532

01:27:10,310 --> 01:27:08,880

for millions of years obviously it

2533

01:27:12,229 --> 01:27:10,320

evolved

2534

01:27:13,590 --> 01:27:12,239

and persisted uh despite a lot of

2535

01:27:17,990 --> 01:27:13,600

different challenges

2536

01:27:20,229 --> 01:27:18,000

uh including the mastodon your mammoth

2537

01:27:22,550 --> 01:27:20,239

trouble switching here the american

2538

01:27:24,310 --> 01:27:22,560

horse you know that all went extinct and

2539

01:27:26,950 --> 01:27:24,320

we only got horses back when the spanish

2540

01:27:29,430 --> 01:27:26,960

brought it back the camel a lot of camel

2541

01:27:31,510 --> 01:27:29,440

always found at these sites fascinating

2542

01:27:33,110 --> 01:27:31,520

i've got a one of our our work sites

2543

01:27:35,030 --> 01:27:33,120

down in in texas actually they

2544

01:27:37,510 --> 01:27:35,040

discovered a lot of camel there actually

2545

01:27:40,629 --> 01:27:37,520

on a place that we were involved with

2546

01:27:42,870 --> 01:27:40,639

um so let's look if you go back uh 35

2547

01:27:46,550 --> 01:27:42,880

million years you know you got less than

2548

01:27:48,149 --> 01:27:46,560

four species it sting 29 million years

2549

01:27:49,990 --> 01:27:48,159

you know negligible negligible

2550

01:27:50,950 --> 01:27:50,000

negligible forty thousand seventy

2551

01:27:52,470 --> 01:27:50,960

thousand years you know kind of

2552

01:27:55,030 --> 01:27:52,480

run-of-the-mill extinctions who knows

2553

01:27:58,830 --> 01:27:55,040

what causes them and then

2554

01:28:04,470 --> 01:28:01,510

thirty-five different genera which

2555

01:28:06,709 --> 01:28:04,480

include a lot of different species

2556

01:28:10,390 --> 01:28:06,719

everything from glyptodons you know

2557

01:28:12,629 --> 01:28:10,400

giant armadillos to you know uh a giant

2558

01:28:15,669 --> 01:28:12,639

slaw you know things people didn't eat

2559

01:28:18,229 --> 01:28:15,679

but we'll get to that in a minute

2560

01:28:19,910 --> 01:28:18,239

uh over 2000 times the previous levels

2561

01:28:21,590 --> 01:28:19,920

of extinction so if there's a baseline

2562

01:28:22,709 --> 01:28:21,600

extinction rate it blew it out of the

2563

01:28:24,709 --> 01:28:22,719

water

2564

01:28:26,470 --> 01:28:24,719

and a greater extension than anything

2565

01:28:28,470 --> 01:28:26,480

since 14 million years ago which is

2566

01:28:30,550 --> 01:28:28,480

associated with a german crater called

2567

01:28:31,669 --> 01:28:30,560

the rise crater it's a lot of research

2568

01:28:33,590 --> 01:28:31,679

it's been done with and that was

2569

01:28:36,629 --> 01:28:33,600

obviously a bad day for earth but that

2570

01:28:39,750 --> 01:28:36,639

was very very distant something very

2571

01:28:41,830 --> 01:28:39,760

unusual occurred to cause this

2572

01:28:43,590 --> 01:28:41,840

what do they think caused it two leading

2573

01:28:44,870 --> 01:28:43,600

hypothesis and i know this was plowing

2574

01:28:46,390 --> 01:28:44,880

grounds you've been down chris and

2575

01:28:47,590 --> 01:28:46,400

probably a lot of your your your

2576

01:28:49,510 --> 01:28:47,600

listeners but

2577

01:28:52,550 --> 01:28:49,520

but we've got to provide the background

2578

01:28:54,070 --> 01:28:52,560

for sure human overkill okay which is

2579

01:28:55,830 --> 01:28:54,080

the clovis people came in and killed him

2580

01:28:57,030 --> 01:28:55,840

or climate change that's the two leading

2581

01:29:02,149 --> 01:28:57,040

hypothesis

2582

01:29:04,070 --> 01:29:02,159

the animals had no fear they either came

2583

01:29:06,070 --> 01:29:04,080

you know controversial but

2584

01:29:08,550 --> 01:29:06,080

came from the west over the bering land

2585

01:29:11,270 --> 01:29:08,560

bridge or came by sea in the past four

2586

01:29:13,189 --> 01:29:11,280

pounds possibly came by c from the east

2587

01:29:15,270 --> 01:29:13,199

uh the two second hypothesis more

2588

01:29:17,110 --> 01:29:15,280

controversial than the first but one way

2589

01:29:18,790 --> 01:29:17,120

or another they got here the animals had

2590

01:29:19,990 --> 01:29:18,800

no fear so they hunted them to

2591

01:29:21,830 --> 01:29:20,000

extinction

2592

01:29:23,270 --> 01:29:21,840

seems plausible

2593

01:29:25,510 --> 01:29:23,280

you know they did have a lethal

2594

01:29:27,110 --> 01:29:25,520

technology that was you know is not

2595

01:29:29,189 --> 01:29:27,120

noted before in the archaeological

2596

01:29:31,030 --> 01:29:29,199

record they had the fluted clovis point

2597

01:29:33,350 --> 01:29:31,040

you know

2598

01:29:35,030 --> 01:29:33,360

beautiful beautiful points i hope to one

2599

01:29:36,550 --> 01:29:35,040

day purchase one but those things are

2600

01:29:39,030 --> 01:29:36,560

expensive

2601  
01:29:41,350 --> 01:29:39,040  
um lethal enough to kill millions of

2602  
01:29:42,870 --> 01:29:41,360  
animals

2603  
01:29:44,470 --> 01:29:42,880  
yeah they're at least enough to kill an

2604  
01:29:46,629 --> 01:29:44,480  
animal but they're only two thousand to

2605  
01:29:49,270 --> 01:29:46,639  
ten thousand clovis people

2606  
01:29:50,629 --> 01:29:49,280  
so how do so few kill so many they

2607  
01:29:53,750 --> 01:29:50,639  
killed mice

2608  
01:29:55,430 --> 01:29:53,760  
hyenas cheetahs lions wolves and

2609  
01:29:57,669 --> 01:29:55,440  
vultures

2610  
01:30:00,709 --> 01:29:57,679  
birds when it stinks

2611  
01:30:02,950 --> 01:30:00,719  
200 the last bird you know with ten

2612  
01:30:05,750 --> 01:30:02,960  
thousand people humans in asia and

2613  
01:30:07,910 --> 01:30:05,760

europa do not cause the same things

2614

01:30:09,990 --> 01:30:07,920

they have no naive prey on maybe true

2615

01:30:12,709 --> 01:30:10,000

for north america but let's look at

2616

01:30:14,310 --> 01:30:12,719

siberian extinctions even if the clovis

2617

01:30:17,189 --> 01:30:14,320

people had managed to hunt all these

2618

01:30:19,030 --> 01:30:17,199

beasts down one by one including things

2619

01:30:20,950 --> 01:30:19,040

that you did not eat like gigantic

2620

01:30:22,470 --> 01:30:20,960

armadillos okay

2621

01:30:25,910 --> 01:30:22,480

and vultures

2622

01:30:28,550 --> 01:30:25,920

even if they manage to do that um

2623

01:30:30,470 --> 01:30:28,560

how do we how do we go find that in in

2624

01:30:32,149 --> 01:30:30,480

other extinctions in other places in the

2625

01:30:33,750 --> 01:30:32,159

northern hemisphere

2626

01:30:36,229 --> 01:30:33,760

like siberia

2627

01:30:38,229 --> 01:30:36,239

there's 202 dated mammoth sites in

2628

01:30:39,669 --> 01:30:38,239

siberia that are

2629

01:30:42,550 --> 01:30:39,679

some of them the last some of them

2630

01:30:43,669 --> 01:30:42,560

before but are clearly before 13 000

2631

01:30:45,430 --> 01:30:43,679

years ago

2632

01:30:47,510 --> 01:30:45,440

that's where the people lived

2633

01:30:48,629 --> 01:30:47,520

those are the people sites that's the

2634

01:30:50,550 --> 01:30:48,639

red

2635

01:30:54,470 --> 01:30:50,560

okay now that's a hell of a long hunt

2636

01:30:56,149 --> 01:30:54,480

for a man a hype for a mammoth isn't it

2637

01:31:01,030 --> 01:30:56,159

if that's the only place the people

2638

01:31:04,790 --> 01:31:02,470

you'd have to have a lot of people up

2639

01:31:06,229 --> 01:31:04,800

there that have not been discovered yet

2640

01:31:08,070 --> 01:31:06,239

and they've done plenty of paleo

2641

01:31:09,430 --> 01:31:08,080

discoveries in the south

2642

01:31:11,430 --> 01:31:09,440

looks like those uh those mammoths that

2643

01:31:12,950 --> 01:31:11,440

have been found like flash frozen

2644

01:31:15,350 --> 01:31:12,960

in like siberia

2645

01:31:16,390 --> 01:31:15,360

that's right that's right how did that

2646

01:31:18,870 --> 01:31:16,400

happen

2647

01:31:21,189 --> 01:31:18,880

that's right and there there were not

2648

01:31:22,629 --> 01:31:21,199

people 13 000 years ago up there not

2649

01:31:25,830 --> 01:31:22,639

much you had one

2650

01:31:27,990 --> 01:31:25,840

got most of them downstairs

2651  
01:31:30,070 --> 01:31:28,000  
one clova sage mammoth site north of

2652  
01:31:32,470 --> 01:31:30,080  
northern siberia animals that stink

2653  
01:31:33,910 --> 01:31:32,480  
there too so

2654  
01:31:35,669 --> 01:31:33,920  
um

2655  
01:31:37,590 --> 01:31:35,679  
so you know it's instructive what

2656  
01:31:39,350 --> 01:31:37,600  
happened in siberia humans surely

2657  
01:31:40,310 --> 01:31:39,360  
contributed the extensions but the only

2658  
01:31:42,629 --> 01:31:40,320  
cause

2659  
01:31:44,550 --> 01:31:42,639  
let's look at the climate hypothesis the

2660  
01:31:46,870 --> 01:31:44,560  
number two reason

2661  
01:31:48,070 --> 01:31:46,880  
extinction and the changes yd cooling

2662  
01:31:49,990 --> 01:31:48,080  
began

2663  
01:31:52,790 --> 01:31:50,000

again it might have been slightly warmer

2664

01:31:54,390 --> 01:31:52,800

or kind of like it is today more or less

2665

01:31:56,870 --> 01:31:54,400

and then all of a sudden the ice it

2666

01:31:59,590 --> 01:31:56,880

re-advanced the glaciers started their

2667

01:32:01,270 --> 01:31:59,600

march forward again temperatures plunged

2668

01:32:03,110 --> 01:32:01,280

animals died out

2669

01:32:04,709 --> 01:32:03,120

but it seems like then if that's what

2670

01:32:06,790 --> 01:32:04,719

happened and it was the climate we know

2671

01:32:08,629 --> 01:32:06,800

that the climate did change dramatically

2672

01:32:10,470 --> 01:32:08,639

it seems like that severe temperature

2673

01:32:11,990 --> 01:32:10,480

changes are there any others in the past

2674

01:32:14,950 --> 01:32:12,000

well yeah there are if you look at the

2675

01:32:18,149 --> 01:32:14,960

vostok ice cores ice core in antarctica

2676

01:32:20,070 --> 01:32:18,159

looking back for 400 000 years very

2677

01:32:21,510 --> 01:32:20,080

regular pattern

2678

01:32:23,669 --> 01:32:21,520

and that would have included all of

2679

01:32:25,430 --> 01:32:23,679

those animals were you know of their

2680

01:32:26,709 --> 01:32:25,440

same form and has fully evolved in the

2681

01:32:29,270 --> 01:32:26,719

same kind of creatures that they were

2682

01:32:31,110 --> 01:32:29,280

when they went extinct but look

2683

01:32:32,390 --> 01:32:31,120

you had brief warm periods and long

2684

01:32:34,870 --> 01:32:32,400

colds

2685

01:32:36,470 --> 01:32:34,880

100 000 year average each time after

2686

01:32:38,149 --> 01:32:36,480

that hundred thousand just regular as

2687

01:32:41,270 --> 01:32:38,159

clockwork and that's probably my lock of

2688

01:32:43,430 --> 01:32:41,280

it cycles and all that stuff the

2689

01:32:45,350 --> 01:32:43,440

the e.t things that may have happened

2690

01:32:47,750 --> 01:32:45,360

would be in between those things you

2691

01:32:51,990 --> 01:32:47,760

know that's the actual earth's

2692

01:32:54,149 --> 01:32:52,000

tilt there uh each time it plunged um

2693

01:32:56,709 --> 01:32:54,159

it was much more dramatic than actually

2694

01:32:58,950 --> 01:32:56,719

what happened at the yd

2695

01:33:01,270 --> 01:32:58,960

right

2696

01:33:04,229 --> 01:33:01,280

past was much worse but no major

2697

01:33:06,709 --> 01:33:04,239

extinctions exact same animals

2698

01:33:08,470 --> 01:33:06,719

so in antarctica the yd was mild extinct

2699

01:33:11,830 --> 01:33:08,480

in south america

2700

01:33:13,590 --> 01:33:11,840

extensions were unique to a milder yd so

2701  
01:33:15,590 --> 01:33:13,600  
it was a milder even though it's known

2702  
01:33:17,990 --> 01:33:15,600  
as a dramatic climate crash if you're

2703  
01:33:20,070 --> 01:33:18,000  
looking over 500 000 years it was

2704  
01:33:24,870 --> 01:33:20,080  
relatively mild but somehow it managed

2705  
01:33:29,030 --> 01:33:27,430  
so uh just from a climate crash so it

2706  
01:33:30,709 --> 01:33:29,040  
couldn't you know the point there if i'm

2707  
01:33:33,030 --> 01:33:30,719  
not making clear enough is that it can't

2708  
01:33:35,110 --> 01:33:33,040  
be just climate or the climate would

2709  
01:33:38,229 --> 01:33:35,120  
have already taken them down there was

2710  
01:33:40,390 --> 01:33:38,239  
something else going on

2711  
01:33:42,149 --> 01:33:40,400  
so the third anomaly is the clovis

2712  
01:33:43,350 --> 01:33:42,159  
adaptions the change for the clovis

2713  
01:33:44,550 --> 01:33:43,360

people

2714

01:33:46,709 --> 01:33:44,560

uh

2715

01:33:48,870 --> 01:33:46,719

twelve thousand years ago the the clovis

2716

01:33:50,390 --> 01:33:48,880

artifacts disappeared and clovis but the

2717

01:33:52,870 --> 01:33:50,400

name of the people and the name of their

2718

01:33:55,669 --> 01:33:52,880

distinctive spear point afterward the

2719

01:33:57,270 --> 01:33:55,679

folsom and redstone points appear and

2720

01:33:58,470 --> 01:33:57,280

we'll look at some of those

2721

01:34:01,189 --> 01:33:58,480

why

2722

01:34:03,590 --> 01:34:01,199

no more mammoths climate comet

2723

01:34:05,430 --> 01:34:03,600

let's review the evidence

2724

01:34:08,550 --> 01:34:05,440

so

2725

01:34:11,110 --> 01:34:08,560

if you look at evidence for mammoths

2726

01:34:13,189 --> 01:34:11,120

they all go out here well in alaska

2727

01:34:14,950 --> 01:34:13,199

evidence shows one bottleneck or

2728

01:34:17,669 --> 01:34:14,960

bottlenecks declines in permanent

2729

01:34:19,030 --> 01:34:17,679

migrations extinctions

2730

01:34:21,830 --> 01:34:19,040

so the mammoth

2731

01:34:23,270 --> 01:34:21,840

goes out blinks out there at 12 9.

2732

01:34:25,189 --> 01:34:23,280

probably not entirely some of them

2733

01:34:27,030 --> 01:34:25,199

actually made it to 4 000 years were

2734

01:34:28,310 --> 01:34:27,040

contemporaneous with the pyramids but

2735

01:34:30,629 --> 01:34:28,320

they were stuck up there on wrangle

2736

01:34:32,790 --> 01:34:30,639

island were three feet tall so things

2737

01:34:33,669 --> 01:34:32,800

had pretty much taken care of by that

2738

01:34:36,629 --> 01:34:33,679

point

2739

01:34:37,990 --> 01:34:36,639

you know your horse is gone

2740

01:34:40,390 --> 01:34:38,000

at least on the fines and the

2741

01:34:42,470 --> 01:34:40,400

radiocarbon dates your bison

2742

01:34:43,910 --> 01:34:42,480

made it

2743

01:34:45,350 --> 01:34:43,920

the elk

2744

01:34:46,950 --> 01:34:45,360

made it

2745

01:34:48,310 --> 01:34:46,960

you find a lot before there's a big

2746

01:34:50,550 --> 01:34:48,320

bottleneck that's why i refer to

2747

01:34:53,669 --> 01:34:50,560

bottlenecks there a lot of dates before

2748

01:34:54,709 --> 01:34:53,679

then it drops off moose he made it and

2749

01:34:56,470 --> 01:34:54,719

humans

2750

01:34:58,790 --> 01:34:56,480

that's when we just start

2751  
01:35:01,030 --> 01:34:58,800  
that's when we show up so you can see

2752  
01:35:03,510 --> 01:35:01,040  
how people would infer

2753  
01:35:05,189 --> 01:35:03,520  
that humans did it to some degree and

2754  
01:35:06,790 --> 01:35:05,199  
they probably were involved and that's

2755  
01:35:08,550 --> 01:35:06,800  
where the yd event

2756  
01:35:09,750 --> 01:35:08,560  
happened and we do not

2757  
01:35:11,669 --> 01:35:09,760  
rule out

2758  
01:35:13,350 --> 01:35:11,679  
that the clovis people were doing a lot

2759  
01:35:14,950 --> 01:35:13,360  
of damage to the ecosystem at the time

2760  
01:35:17,750 --> 01:35:14,960  
and could have taken them out

2761  
01:35:19,590 --> 01:35:17,760  
after this for the survivors or could

2762  
01:35:22,229 --> 01:35:19,600  
have been very close to having them gone

2763  
01:35:25,590 --> 01:35:22,239

or whatnot but that doesn't explain the

2764

01:35:26,790 --> 01:35:25,600

vultures the mice and the birds to me

2765

01:35:28,550 --> 01:35:26,800

so there's evidence for animal

2766

01:35:29,830 --> 01:35:28,560

extinctions and human declines at the id

2767

01:35:31,430 --> 01:35:29,840

of that

2768

01:35:34,709 --> 01:35:31,440

let's look at the points the human

2769

01:35:36,470 --> 01:35:34,719

declines and this is fascinating to me

2770

01:35:39,030 --> 01:35:36,480

these are redstone points the ones that

2771

01:35:41,030 --> 01:35:39,040

come right after clovis

2772

01:35:44,790 --> 01:35:41,040

let's look at south carolina

2773

01:35:47,270 --> 01:35:44,800

okay so that's uh all from my uh

2774

01:35:49,910 --> 01:35:47,280

goodyear's work down there and he's you

2775

01:35:51,350 --> 01:35:49,920

know the number one paleo point guy in

2776

01:35:52,950 --> 01:35:51,360

the southeast

2777

01:35:55,669 --> 01:35:52,960

along with you know some others randy

2778

01:35:57,590 --> 01:35:55,679

daniel up here at ecu etc and that's

2779

01:35:59,590 --> 01:35:57,600

redstone so that's where they're finding

2780

01:36:01,430 --> 01:35:59,600

those and that's you know starting i

2781

01:36:04,470 --> 01:36:01,440

think roughly two or three hundred years

2782

01:36:06,550 --> 01:36:04,480

after this event you know so

2783

01:36:07,990 --> 01:36:06,560

i'll say twelve thousand three twelve

2784

01:36:09,350 --> 01:36:08,000

thousand four twelve thousand five

2785

01:36:11,910 --> 01:36:09,360

hundred years ago you might have found

2786

01:36:14,310 --> 01:36:11,920

those in the archaic points

2787

01:36:16,629 --> 01:36:14,320

go back to paleo

2788

01:36:19,030 --> 01:36:16,639

excuse me i was talking clovis yeah

2789

01:36:21,910 --> 01:36:19,040

that's the abundance of clovis points

2790

01:36:22,950 --> 01:36:21,920

that's the follow-on

2791

01:36:25,110 --> 01:36:22,960

okay

2792

01:36:26,550 --> 01:36:25,120

so after twelve nine twelve eight or

2793

01:36:29,030 --> 01:36:26,560

twelve nine before twelve eight or

2794

01:36:31,270 --> 01:36:29,040

twelve nine you have a lot of points

2795

01:36:33,350 --> 01:36:31,280

that indicate a lot of people

2796

01:36:35,350 --> 01:36:33,360

or the same number of people

2797

01:36:37,350 --> 01:36:35,360

creating more

2798

01:36:39,830 --> 01:36:37,360

arrowheads but let's assume arrowheads

2799

01:36:41,590 --> 01:36:39,840

are a proxy for population

2800

01:36:43,910 --> 01:36:41,600

um if that's assumed there were more

2801  
01:36:45,750 --> 01:36:43,920  
people there now look at the arrowhead

2802  
01:36:48,470 --> 01:36:45,760  
production of the next

2803  
01:36:51,830 --> 01:36:49,910  
and that was separated by several

2804  
01:36:54,629 --> 01:36:51,840  
hundred years that was the bounce-back

2805  
01:36:56,790 --> 01:36:54,639  
population that was the leftover people

2806  
01:37:00,070 --> 01:36:56,800  
and what they made so they lost their

2807  
01:37:01,109 --> 01:37:00,080  
technology they lost their population

2808  
01:37:03,350 --> 01:37:01,119  
and they

2809  
01:37:04,870 --> 01:37:03,360  
they battled back

2810  
01:37:07,910 --> 01:37:04,880  
i find that a fascinating we have a

2811  
01:37:09,350 --> 01:37:07,920  
paper on that it's five or six years old

2812  
01:37:11,109 --> 01:37:09,360  
i can see that there are there's a lot

2813  
01:37:13,109 --> 01:37:11,119

of overlay between the two

2814

01:37:15,109 --> 01:37:13,119

in terms of population so like you know

2815

01:37:16,870 --> 01:37:15,119

they're clusters around the same area

2816

01:37:18,830 --> 01:37:16,880

yeah savannah river

2817

01:37:21,669 --> 01:37:18,840

yeah so they found the same

2818

01:37:23,750 --> 01:37:21,679

places to be you know habitable and

2819

01:37:25,109 --> 01:37:23,760

enjoyable and livable

2820

01:37:26,870 --> 01:37:25,119

actually is probably pretty rough time

2821

01:37:27,990 --> 01:37:26,880

even 300 years later

2822

01:37:29,669 --> 01:37:28,000

uh

2823

01:37:31,350 --> 01:37:29,679

well it would have been later than that

2824

01:37:32,550 --> 01:37:31,360

and i've i i can't tell you and i'm

2825

01:37:34,149 --> 01:37:32,560

sorry that's why i've been being a

2826

01:37:35,990 --> 01:37:34,159

generalist can be tough sometimes i

2827

01:37:39,270 --> 01:37:36,000

don't know where the redstones post date

2828

01:37:41,590 --> 01:37:39,280

the actual yd which was 12 000 i mean

2829

01:37:43,189 --> 01:37:41,600

1200 years long

2830

01:37:45,510 --> 01:37:43,199

so i don't know whether you start

2831

01:37:46,950 --> 01:37:45,520

finding those during that kind of dark

2832

01:37:48,790 --> 01:37:46,960

and cold time

2833

01:37:50,709 --> 01:37:48,800

or whether you just find them afterwards

2834

01:37:53,430 --> 01:37:50,719

but i'm happy to find out but that is

2835

01:37:56,070 --> 01:37:53,440

definitely that point

2836

01:37:56,870 --> 01:37:56,080

as much points were much diminished over

2837

01:37:58,310 --> 01:37:56,880

that

2838

01:38:02,310 --> 01:37:58,320

transitional time

2839

01:38:04,790 --> 01:38:02,320

points in population so there you got uh

2840

01:38:06,390 --> 01:38:04,800

just a visual representation of that

2841

01:38:07,669 --> 01:38:06,400

remember the graph is going the wrong

2842

01:38:08,950 --> 01:38:07,679

way that you might think it does the

2843

01:38:11,750 --> 01:38:08,960

older times are the right the younger

2844

01:38:13,669 --> 01:38:11,760

times the left yep you've got yeah

2845

01:38:15,590 --> 01:38:13,679

you got clovis then virginia south

2846

01:38:17,669 --> 01:38:15,600

carolina and north carolina so we just

2847

01:38:19,750 --> 01:38:17,679

saw south carolina on a point database

2848

01:38:26,550 --> 01:38:19,760

but all three of those states show a

2849

01:38:33,109 --> 01:38:30,550

due to yd cold per impact

2850

01:38:35,030 --> 01:38:33,119

okay why are the anomalies simultaneous

2851

01:38:36,550 --> 01:38:35,040

uh kt impact produced in the extinction

2852

01:38:38,629 --> 01:38:36,560

the dinosaurs suddenly changed the

2853

01:38:41,750 --> 01:38:38,639

climate caused population bottlenecks

2854

01:38:44,470 --> 01:38:41,760

caused by another impact

2855

01:38:45,830 --> 01:38:44,480

why the impact deposits 12 000 years ago

2856

01:38:47,350 --> 01:38:45,840

and 900

2857

01:38:49,870 --> 01:38:47,360

actually i wrote the number down i think

2858

01:38:53,030 --> 01:38:49,880

the most accepted numbers 12

2859

01:38:55,669 --> 01:38:53,040

768 years ago sometime in june

2860

01:38:57,350 --> 01:38:55,679

debris across two continents

2861

01:38:58,790 --> 01:38:57,360

and i'm sorry that

2862

01:39:02,070 --> 01:38:58,800

earlier version i corrected that we're

2863

01:39:04,229 --> 01:39:02,080

up to four continents now

2864

01:39:06,149 --> 01:39:04,239

ydb layer controversial here's where we

2865

01:39:07,750 --> 01:39:06,159

find them that was that first site there

2866

01:39:09,430 --> 01:39:07,760

gainey michigan that william topping

2867

01:39:12,070 --> 01:39:09,440

came across

2868

01:39:14,229 --> 01:39:12,080

and it's still i think the site with the

2869

01:39:16,149 --> 01:39:14,239

most abundant proxies

2870

01:39:16,950 --> 01:39:16,159

well isn't that supposed to be the area

2871

01:39:19,189 --> 01:39:16,960

like

2872

01:39:20,149 --> 01:39:19,199

when we had charles p o dale on here uh

2873

01:39:22,709 --> 01:39:20,159

a couple

2874

01:39:24,470 --> 01:39:22,719

about two months ago uh he had actually

2875

01:39:26,550 --> 01:39:24,480

he actually suggested that michigan was

2876

01:39:28,709 --> 01:39:26,560

actually the impact site

2877

01:39:30,229 --> 01:39:28,719

based on well we'll get that one

2878

01:39:31,510 --> 01:39:30,239

yeah oh okay so we're going to that boat

2879

01:39:32,870 --> 01:39:31,520

okay

2880

01:39:34,550 --> 01:39:32,880

yeah i stay open-minded about this stuff

2881

01:39:36,149 --> 01:39:34,560

so when you start picking the crater and

2882

01:39:37,830 --> 01:39:36,159

all this stuff you know we're supposed

2883

01:39:39,109 --> 01:39:37,840

to have to explain everything with the

2884

01:39:40,390 --> 01:39:39,119

science but you can't

2885

01:39:42,950 --> 01:39:40,400

you know some of the

2886

01:39:47,109 --> 01:39:44,709

some of the analytical techniques are

2887

01:39:49,109 --> 01:39:47,119

you know kind of uh ridiculously simple

2888

01:39:51,030 --> 01:39:49,119

the these powerful magnets that you can

2889

01:39:53,350 --> 01:39:51,040

and they used to be really expensive you

2890

01:39:54,709 --> 01:39:53,360

know but neodymium magnets are now

2891

01:39:56,310 --> 01:39:54,719

in a lot of different things that's why

2892

01:39:58,629 --> 01:39:56,320

you find more and more magnetic stuff

2893

01:39:59,990 --> 01:39:58,639

out there to play with and fool around

2894

01:40:01,430 --> 01:40:00,000

with but they've gotten really cheap so

2895

01:40:03,189 --> 01:40:01,440

you can buy these things you just pass

2896

01:40:04,629 --> 01:40:03,199

them over the stratigraphy

2897

01:40:05,590 --> 01:40:04,639

and you can pull out these magnetic

2898

01:40:06,629 --> 01:40:05,600

grains

2899

01:40:08,390 --> 01:40:06,639

okay

2900

01:40:11,189 --> 01:40:08,400

that's pretty simple way to go see this

2901  
01:40:12,550 --> 01:40:11,199  
stuff and what you find is these furious

2902  
01:40:14,149 --> 01:40:12,560  
okay

2903  
01:40:15,669 --> 01:40:14,159  
and that's what topping came across

2904  
01:40:17,189 --> 01:40:15,679  
those early on and they were confirmed

2905  
01:40:18,950 --> 01:40:17,199  
later by

2906  
01:40:20,709 --> 01:40:18,960  
more detailed analysis that there was

2907  
01:40:22,709 --> 01:40:20,719  
something unusual going on i think it's

2908  
01:40:25,669 --> 01:40:22,719  
the clearest we've ever seen this

2909  
01:40:26,709 --> 01:40:25,679  
yeah 200 nanometers so

2910  
01:40:27,669 --> 01:40:26,719  
it's

2911  
01:40:30,149 --> 01:40:27,679  
uh

2912  
01:40:32,070 --> 01:40:30,159  
very small yeah that's very very very

2913  
01:40:33,590 --> 01:40:32,080

very small unrespected us and that's

2914

01:40:36,149 --> 01:40:33,600

actually there they get even smaller

2915

01:40:38,149 --> 01:40:36,159

than that we got some beautiful

2916

01:40:42,070 --> 01:40:38,159

no don't tell me i just crashed on a

2917

01:40:47,030 --> 01:40:42,080

live podcast microsoft

2918

01:40:51,990 --> 01:40:50,310

going through here again so yeah um keep

2919

01:40:53,990 --> 01:40:52,000

talking and let me find my spot let's

2920

01:40:55,350 --> 01:40:54,000

see kyle is giving a shout out to says

2921

01:40:57,109 --> 01:40:55,360

he enjoyed it fellas early flight

2922

01:40:59,430 --> 01:40:57,119

tomorrow so he's off looks forward to

2923

01:41:01,430 --> 01:40:59,440

catching the rest on demand uh kyle

2924

01:41:03,350 --> 01:41:01,440

thank you very much for joining us

2925

01:41:05,830 --> 01:41:03,360

and uh we actually have people in here

2926  
01:41:09,750 --> 01:41:05,840  
from all across the u.s and i even have

2927  
01:41:11,350 --> 01:41:09,760  
um uh guests as far away as australia

2928  
01:41:14,870 --> 01:41:11,360  
joining us tonight

2929  
01:41:20,470 --> 01:41:18,629  
we're an international family

2930  
01:41:23,109 --> 01:41:20,480  
see i've got this macro thing where i

2931  
01:41:24,870 --> 01:41:23,119  
can't go into anything but show mode

2932  
01:41:29,350 --> 01:41:24,880  
damn it

2933  
01:41:32,790 --> 01:41:30,709  
this is

2934  
01:41:33,830 --> 01:41:32,800  
not the way you want to do it

2935  
01:41:35,510 --> 01:41:33,840  
you know what

2936  
01:41:37,350 --> 01:41:35,520  
shit's more hold on there have been

2937  
01:41:39,270 --> 01:41:37,360  
episodes where we had like a new webcam

2938  
01:41:40,950 --> 01:41:39,280

on and it literally cut out sound every

2939

01:41:43,109 --> 01:41:40,960

now and again and i think there's a

2940

01:41:45,510 --> 01:41:43,119

couple of episodes where like 20 minutes

2941

01:41:48,709 --> 01:41:45,520

we don't have any sound on the broadcast

2942

01:41:50,709 --> 01:41:48,719

so it happens you just roll with it

2943

01:41:52,229 --> 01:41:50,719

you get happy you know you just just do

2944

01:41:53,990 --> 01:41:52,239

your thing

2945

01:41:55,669 --> 01:41:54,000

well i should be more i should be better

2946

01:41:57,750 --> 01:41:55,679

with it but i was told to put it and i

2947

01:42:00,390 --> 01:41:57,760

think i needed to put it in this uh show

2948

01:42:01,430 --> 01:42:00,400

mode and i can't break out of it as

2949

01:42:04,870 --> 01:42:01,440

easily

2950

01:42:06,709 --> 01:42:04,880

uh i went through all this

2951

01:42:09,430 --> 01:42:06,719

they are dropping off in droves now

2952

01:42:11,030 --> 01:42:09,440

chris i have to say that um

2953

01:42:12,149 --> 01:42:11,040

well no actually we've increased in

2954

01:42:14,070 --> 01:42:12,159

listeners i have to say that the

2955

01:42:16,470 --> 01:42:14,080

production values on this powerpoint are

2956

01:42:17,750 --> 01:42:16,480

absolutely outstanding and i appreciate

2957

01:42:20,149 --> 01:42:17,760

the time and effort that you took to put

2958

01:42:21,510 --> 01:42:20,159

into this because my goodness it's

2959

01:42:22,950 --> 01:42:21,520

fantastic

2960

01:42:24,390 --> 01:42:22,960

mostly others

2961

01:42:26,550 --> 01:42:24,400

um

2962

01:42:28,629 --> 01:42:26,560

you think i could operate it better huh

2963

01:42:31,270 --> 01:42:28,639

well microsoft is the way like again

2964

01:42:32,390 --> 01:42:31,280

microsoft office is

2965

01:42:35,109 --> 01:42:32,400

like

2966

01:42:37,590 --> 01:42:35,119

on mac it's always unstable it happens

2967

01:42:39,669 --> 01:42:37,600

yeah and you're playing microsoft on mac

2968

01:42:41,590 --> 01:42:39,679

right yeah

2969

01:42:42,790 --> 01:42:41,600

um why do you impact hypothesis twelve

2970

01:42:45,270 --> 01:42:42,800

thousand years ago mentally in order

2971

01:42:47,510 --> 01:42:45,280

ninja four continents

2972

01:42:48,870 --> 01:42:47,520

danny i think that's where we left off

2973

01:42:53,189 --> 01:42:48,880

neodymium

2974

01:42:55,109 --> 01:42:53,199

don't see enough of that

2975

01:42:56,550 --> 01:42:55,119

and that's what happens you go back to

2976

01:42:57,990 --> 01:42:56,560

these sites

2977

01:43:00,070 --> 01:42:58,000

and generally

2978

01:43:01,590 --> 01:43:00,080

you will see some transition it's not at

2979

01:43:04,229 --> 01:43:01,600

all places we'll get that in a minute

2980

01:43:07,109 --> 01:43:04,239

but you see a a bump

2981

01:43:08,629 --> 01:43:07,119

to put it mildly from zero to

2982

01:43:11,510 --> 01:43:08,639

1600

2983

01:43:12,550 --> 01:43:11,520

grains per kilogram in this case

2984

01:43:14,709 --> 01:43:12,560

um

2985

01:43:15,830 --> 01:43:14,719

at that very point

2986

01:43:18,149 --> 01:43:15,840

okay

2987

01:43:19,750 --> 01:43:18,159

and that be the point that's the yd

2988

01:43:22,790 --> 01:43:19,760

boundary at that location and it can

2989

01:43:24,470 --> 01:43:22,800

have many many different looks to it

2990

01:43:26,629 --> 01:43:24,480

boom that's where you find your

2991

01:43:28,149 --> 01:43:26,639

abundances

2992

01:43:29,669 --> 01:43:28,159

carbon sphericals those are little

2993

01:43:32,229 --> 01:43:29,679

vesicular stuff that they told us was

2994

01:43:34,629 --> 01:43:32,239

nothing but bug poop or fungus

2995

01:43:36,470 --> 01:43:34,639

okay had some of the

2996

01:43:40,709 --> 01:43:36,480

best geochemists in the world looking at

2997

01:43:43,189 --> 01:43:40,719

it but we must just misinterpreted it

2998

01:43:44,629 --> 01:43:43,199

roughly spherical got hard shell spongy

2999

01:43:47,430 --> 01:43:44,639

interior

3000

01:43:49,109 --> 01:43:47,440

and that's carbon you know melting at

3001  
01:43:50,550 --> 01:43:49,119  
super high temperatures and then

3002  
01:43:52,950 --> 01:43:50,560  
reforming

3003  
01:43:54,950 --> 01:43:52,960  
and then within it

3004  
01:43:58,470 --> 01:43:54,960  
you get these little gas facil

3005  
01:44:02,550 --> 01:44:00,550  
and glass like carbon several different

3006  
01:44:05,830 --> 01:44:02,560  
forms of carbon

3007  
01:44:08,229 --> 01:44:05,840  
what's special about this stuff

3008  
01:44:10,550 --> 01:44:08,239  
contains some weird stuff like et

3009  
01:44:13,109 --> 01:44:10,560  
fullerenes okay

3010  
01:44:15,510 --> 01:44:13,119  
and fullerenes are you know very exotic

3011  
01:44:17,109 --> 01:44:15,520  
form of carbon that we find trapped in

3012  
01:44:18,229 --> 01:44:17,119  
these things this is something i haven't

3013  
01:44:20,550 --> 01:44:18,239

heard before

3014

01:44:22,310 --> 01:44:20,560

yeah rare on earth common in meteorites

3015

01:44:24,709 --> 01:44:22,320

and and that was all

3016

01:44:27,510 --> 01:44:24,719

uh it's very very controversial and that

3017

01:44:29,590 --> 01:44:27,520

was um contributed by luanne becker

3018

01:44:31,750 --> 01:44:29,600

who's worth looking up who's both

3019

01:44:33,030 --> 01:44:31,760

controversial but also got her own damn

3020

01:44:35,030 --> 01:44:33,040

lab you know

3021

01:44:36,790 --> 01:44:35,040

look at johns hopkins

3022

01:44:39,430 --> 01:44:36,800

and that's where you get helium-3

3023

01:44:40,470 --> 01:44:39,440

trapped inside of a carbon uh lattice

3024

01:44:41,830 --> 01:44:40,480

like that

3025

01:44:43,350 --> 01:44:41,840

i don't know if you call that a lattice

3026

01:44:44,870 --> 01:44:43,360

or a buckyball but you know this

3027

01:44:48,149 --> 01:44:44,880

fullerene's named after bookmonster

3028

01:44:52,070 --> 01:44:49,830

once thought that our homes would all be

3029

01:44:54,070 --> 01:44:52,080

under a half of one of those right

3030

01:44:56,149 --> 01:44:54,080

okay murray springs clevis light the

3031

01:44:58,709 --> 01:44:56,159

black mat get the fun stuff the carbon

3032

01:45:00,149 --> 01:44:58,719

rich layer

3033

01:45:01,750 --> 01:45:00,159

now the funny thing is you take these

3034

01:45:04,070 --> 01:45:01,760

things you know individually you'd say

3035

01:45:06,229 --> 01:45:04,080

well it's interesting

3036

01:45:08,470 --> 01:45:06,239

you know that we've got a black mat

3037

01:45:10,070 --> 01:45:08,480

right at an interesting time where we

3038

01:45:12,310 --> 01:45:10,080

find

3039

01:45:15,270 --> 01:45:12,320

the clovis artifacts the mammoth

3040

01:45:20,390 --> 01:45:18,229

only below and not above and then

3041

01:45:23,109 --> 01:45:20,400

directly above where they're last found

3042

01:45:25,270 --> 01:45:23,119

but below the black mat and oftentimes

3043

01:45:27,189 --> 01:45:25,280

this is misunderstood justifiably so you

3044

01:45:30,390 --> 01:45:27,199

can't get all the nuance to this stuff

3045

01:45:33,270 --> 01:45:30,400

but the black mat is not from space

3046

01:45:34,310 --> 01:45:33,280

the black mat is the wetland

3047

01:45:36,790 --> 01:45:34,320

of the

3048

01:45:40,229 --> 01:45:36,800

dry cold environment

3049

01:45:41,669 --> 01:45:40,239

that persisted in that thousand years

3050

01:45:42,550 --> 01:45:41,679

right

3051

01:45:44,709 --> 01:45:42,560

now

3052

01:45:46,229 --> 01:45:44,719

and i double checked on this

3053

01:45:49,270 --> 01:45:46,239

when you go and find the black mat in

3054

01:45:51,350 --> 01:45:49,280

europa it actually is burned stuff

3055

01:45:53,350 --> 01:45:51,360

but the stuff in america and a lot of

3056

01:45:54,790 --> 01:45:53,360

people say oh it's just wetlands and you

3057

01:45:55,990 --> 01:45:54,800

know and the critics will say and there

3058

01:45:57,510 --> 01:45:56,000

was a whole paper on it but it's got

3059

01:45:59,750 --> 01:45:57,520

pagoda and whatnot yeah we understand

3060

01:46:02,229 --> 01:45:59,760

it's a wetland but we're not testing the

3061

01:46:05,030 --> 01:46:02,239

black matte you're testing just below it

3062

01:46:06,310 --> 01:46:05,040

and you find these what we call proxies

3063

01:46:09,510 --> 01:46:06,320

you're not going to find a sign that

3064

01:46:11,189 --> 01:46:09,520

says comet hit here or you know bad day

3065

01:46:12,470 --> 01:46:11,199

in north america

3066

01:46:15,030 --> 01:46:12,480

you're gonna have to you know

3067

01:46:17,030 --> 01:46:15,040

interpolate from various materials that

3068

01:46:19,510 --> 01:46:17,040

something happened and you do not find

3069

01:46:22,070 --> 01:46:19,520

below or above that layer

3070

01:46:23,669 --> 01:46:22,080

magnetic spheres magnetic grains iridium

3071

01:46:26,070 --> 01:46:23,679

platinum particularly now should have

3072

01:46:27,910 --> 01:46:26,080

replaced that there is an iridium signal

3073

01:46:29,590 --> 01:46:27,920

at some of these sites but now it's been

3074

01:46:31,830 --> 01:46:29,600

completely eclipsed by the platinum

3075

01:46:33,189 --> 01:46:31,840

signal that that chris moore will talk

3076

01:46:34,550 --> 01:46:33,199

about him in a little while has been

3077

01:46:35,590 --> 01:46:34,560

finding

3078

01:46:36,950 --> 01:46:35,600

and

3079

01:46:38,870 --> 01:46:36,960

look at murray springs here they are

3080

01:46:40,950 --> 01:46:38,880

digging the black mat back in the day

3081

01:46:42,790 --> 01:46:40,960

it's probably 40 50 years ago even maybe

3082

01:46:44,550 --> 01:46:42,800

not quite that long but

3083

01:46:45,510 --> 01:46:44,560

see the skeleton in there eloise the

3084

01:46:48,550 --> 01:46:45,520

mammoth

3085

01:46:50,950 --> 01:46:48,560

actually stained by the black mat oh

3086

01:46:56,149 --> 01:46:50,960

she was one of the last girls

3087

01:47:01,189 --> 01:46:58,550

markers on bones below the mat

3088

01:47:03,109 --> 01:47:01,199

and hands find sphericals too and he's

3089

01:47:06,149 --> 01:47:03,119

the most respected paleo

3090

01:47:10,470 --> 01:47:06,159

archaeologist in the u.s getting on in

3091

01:47:12,070 --> 01:47:10,480

years no extinct bones are in the mat or

3092

01:47:14,390 --> 01:47:12,080

above the mat

3093

01:47:15,990 --> 01:47:14,400

they've always they always knew that

3094

01:47:18,709 --> 01:47:16,000

they never looked at the mat and that's

3095

01:47:21,510 --> 01:47:18,719

okay you know science has certain

3096

01:47:23,270 --> 01:47:21,520

jumps ahead occasionally but you kind of

3097

01:47:25,350 --> 01:47:23,280

looking back at it guys hey god guys

3098

01:47:28,310 --> 01:47:25,360

didn't you ever think when the when the

3099

01:47:30,950 --> 01:47:28,320

whole study of the comet dinosaur

3100

01:47:32,870 --> 01:47:30,960

connection that was all based off of a

3101

01:47:35,830 --> 01:47:32,880

distinct transition

3102

01:47:37,590 --> 01:47:35,840

in a narrow layer and a change you know

3103

01:47:40,229 --> 01:47:37,600

and the petrology in that case the

3104

01:47:41,750 --> 01:47:40,239

actual stone this stuff in in stone yet

3105

01:47:43,510 --> 01:47:41,760

this is soil it's not been long enough

3106

01:47:44,950 --> 01:47:43,520

turn into rock but wouldn't you have

3107

01:47:46,070 --> 01:47:44,960

thought that somebody just said they

3108

01:47:47,830 --> 01:47:46,080

probably did

3109

01:47:49,750 --> 01:47:47,840

in that black mat kind of like the one

3110

01:47:51,510 --> 01:47:49,760

that killed the dinosaurs so then you

3111

01:47:53,910 --> 01:47:51,520

look at haynes again and this is vance

3112

01:47:56,709 --> 01:47:53,920

haynes and he's the you know the premier

3113

01:47:57,750 --> 01:47:56,719

archaeologist of this period

3114

01:47:59,350 --> 01:47:57,760

and probably could have become a

3115

01:48:00,950 --> 01:47:59,360

supporter but i think he got pulled back

3116

01:48:02,870 --> 01:48:00,960

and he had some favorable things early

3117

01:48:05,590 --> 01:48:02,880

on so he went out after we came out with

3118

01:48:07,109 --> 01:48:05,600

our study and basically what he said is

3119

01:48:08,709 --> 01:48:07,119

you know they got a point i don't know

3120

01:48:11,350 --> 01:48:08,719

whether they're right

3121

01:48:14,149 --> 01:48:11,360

but no one's done

3122

01:48:17,350 --> 01:48:14,159

i'm paraphrasing here no one has done i

3123

01:48:19,270 --> 01:48:17,360

have not done a full review of where i

3124

01:48:21,109 --> 01:48:19,280

find the black matte

3125

01:48:23,109 --> 01:48:21,119

personally and my colleagues over the

3126

01:48:24,470 --> 01:48:23,119

years at paleo sites north america so he

3127

01:48:26,550 --> 01:48:24,480

came out with a great paper that i've

3128

01:48:28,709 --> 01:48:26,560

gotten the links at the end of the thing

3129

01:48:31,990 --> 01:48:28,719

that that you can share too

3130

01:48:34,390 --> 01:48:32,000

and out of 97 clovis made sites that we

3131

01:48:36,229 --> 01:48:34,400

were aware of in science 70 of them had

3132

01:48:37,590 --> 01:48:36,239

black mats

3133

01:48:40,629 --> 01:48:37,600

and no one had ever published that

3134

01:48:41,990 --> 01:48:40,639

before in that weird

3135

01:48:43,590 --> 01:48:42,000

now notice one of the best ones down

3136

01:48:45,430 --> 01:48:43,600

there in the bottom of south carolina

3137

01:48:47,830 --> 01:48:45,440

and we can add some now too this was

3138

01:48:49,430 --> 01:48:47,840

within the haynes paper but but doesn't

3139

01:48:51,990 --> 01:48:49,440

have a black mat but we find the

3140

01:48:53,270 --> 01:48:52,000

material okay so you don't have to have

3141

01:48:55,350 --> 01:48:53,280

the black mat that just means there

3142

01:48:56,950 --> 01:48:55,360

wasn't the wetland there that doesn't

3143

01:48:59,189 --> 01:48:56,960

mean the spherules and all that stuff

3144

01:49:02,470 --> 01:48:59,199

didn't land and i should say for people

3145

01:49:06,229 --> 01:49:02,480

too the spherules is the vaporization

3146

01:49:08,550 --> 01:49:06,239

of the impact material itself or that

3147

01:49:11,030 --> 01:49:08,560

substrate that it slapped into

3148

01:49:13,590 --> 01:49:11,040

so it's a mix the platinum comes from

3149

01:49:14,470 --> 01:49:13,600

space but it might be tied up with some

3150

01:49:16,629 --> 01:49:14,480

iron

3151  
01:49:18,310 --> 01:49:16,639  
that actually came well the you know the

3152  
01:49:20,870 --> 01:49:18,320  
iron can obviously come from space as

3153  
01:49:22,550 --> 01:49:20,880  
well but it might just be iron in quebec

3154  
01:49:24,070 --> 01:49:22,560  
that was in you know trained in the ice

3155  
01:49:26,229 --> 01:49:24,080  
sheet you know

3156  
01:49:27,430 --> 01:49:26,239  
within rocks etc and so forth so it's a

3157  
01:49:29,590 --> 01:49:27,440  
mixture all that stuff it's the

3158  
01:49:32,149 --> 01:49:29,600  
vaporization the cloud

3159  
01:49:35,910 --> 01:49:32,159  
that came with that intense

3160  
01:49:36,870 --> 01:49:35,920  
high-energy event spans the whole us

3161  
01:49:39,030 --> 01:49:36,880  
goes all the way through the

3162  
01:49:40,629 --> 01:49:39,040  
mid-continent left to right and here's

3163  
01:49:41,750 --> 01:49:40,639

some pictures of the black man i love

3164

01:49:43,590 --> 01:49:41,760

this stuff

3165

01:49:44,870 --> 01:49:43,600

i think i'd love to see another paper

3166

01:49:45,990 --> 01:49:44,880

done that just goes through and i can't

3167

01:49:47,669 --> 01:49:46,000

get enough of these pictures it shows

3168

01:49:49,830 --> 01:49:47,679

what a geek i am

3169

01:49:52,709 --> 01:49:49,840

there's a colorado

3170

01:49:54,629 --> 01:49:52,719

lubbock lake texas hell's gap boom boom

3171

01:49:56,870 --> 01:49:54,639

boom boom boom and those are all well

3172

01:49:58,629 --> 01:49:56,880

established well-dated

3173

01:50:01,910 --> 01:49:58,639

well-understood archaeological

3174

01:50:04,709 --> 01:50:01,920

archaeological and paleontological sites

3175

01:50:05,990 --> 01:50:04,719

where the bones and the human stuff the

3176

01:50:09,510 --> 01:50:06,000

clovis stuff

3177

01:50:12,310 --> 01:50:09,520

is found only below never within and

3178

01:50:15,109 --> 01:50:12,320

never above if somebody sho

3179

01:50:17,910 --> 01:50:15,119

pops up with a clovis age mammoth tusk

3180

01:50:20,870 --> 01:50:17,920

above it we'll have to eat our hat

3181

01:50:22,229 --> 01:50:20,880

boom boom boom

3182

01:50:24,470 --> 01:50:22,239

so essentially what i've always been

3183

01:50:25,350 --> 01:50:24,480

told is that the black mat is based on

3184

01:50:26,709 --> 01:50:25,360

burn

3185

01:50:29,669 --> 01:50:26,719

and what you're saying is that in north

3186

01:50:31,750 --> 01:50:29,679

america it's not it's wetlands and in

3187

01:50:34,070 --> 01:50:31,760

the in europe it is burned

3188

01:50:38,470 --> 01:50:36,629

yeah just below it it's you do find the

3189

01:50:41,109 --> 01:50:38,480

carbon sphericals okay

3190

01:50:42,709 --> 01:50:41,119

okay but they're not abundant enough to

3191

01:50:45,030 --> 01:50:42,719

cause that black

3192

01:50:47,189 --> 01:50:45,040

that black is organic material so it's

3193

01:50:48,629 --> 01:50:47,199

just like um if you're like a swamp like

3194

01:50:51,430 --> 01:50:48,639

there was a swamp area that covered the

3195

01:50:53,669 --> 01:50:51,440

entire region and for whatever reason it

3196

01:50:54,950 --> 01:50:53,679

just got compressed and just say an algo

3197

01:50:55,830 --> 01:50:54,960

mat

3198

01:50:58,470 --> 01:50:55,840

okay

3199

01:51:00,790 --> 01:50:58,480

you know a cold environment with a bunch

3200

01:51:02,070 --> 01:51:00,800

of water and not a lot of transpiration

3201

01:51:05,189 --> 01:51:02,080

and it's just sitting out there it's

3202

01:51:06,950 --> 01:51:05,199

cold it's miserable it's icy a lot maybe

3203

01:51:08,629 --> 01:51:06,960

in the summers if they even had them i

3204

01:51:09,990 --> 01:51:08,639

don't know but for whatever reason it

3205

01:51:12,390 --> 01:51:10,000

produced a

3206

01:51:14,070 --> 01:51:12,400

you know organic mat

3207

01:51:15,270 --> 01:51:14,080

and you'd call it a swamp you know but

3208

01:51:19,350 --> 01:51:15,280

it probably didn't have

3209

01:51:22,229 --> 01:51:21,030

so out of 97 clover state sites i've

3210

01:51:23,350 --> 01:51:22,239

been forgetting my scotch here i've been

3211

01:51:24,470 --> 01:51:23,360

getting so interested in the science

3212

01:51:26,629 --> 01:51:24,480

isn't that good

3213

01:51:27,830 --> 01:51:26,639

um

3214

01:51:30,229 --> 01:51:27,840

let's go ahead and see how those

3215

01:51:31,750 --> 01:51:30,239

sediments build up so slowly for tens of

3216

01:51:33,189 --> 01:51:31,760

thousands of years

3217

01:51:34,790 --> 01:51:33,199

that stuff was filled with the bones of

3218

01:51:36,870 --> 01:51:34,800

extinct animals you can dig down and

3219

01:51:38,550 --> 01:51:36,880

find it on and on and on and on then at

3220

01:51:41,189 --> 01:51:38,560

12 9

3221

01:51:42,790 --> 01:51:41,199

the ydb and that's a key term and it's

3222

01:51:44,390 --> 01:51:42,800

tough with this science is that you kind

3223

01:51:46,709 --> 01:51:44,400

of got to get it don't have any catchy

3224

01:51:48,790 --> 01:51:46,719

terms so maybe clove was common but what

3225

01:51:49,830 --> 01:51:48,800

we call it is the younger driest

3226

01:51:51,430 --> 01:51:49,840

boundary

3227

01:51:53,270 --> 01:51:51,440

and that's a combination of the fact

3228

01:51:54,870 --> 01:51:53,280

that got the climate change the younger

3229

01:51:56,870 --> 01:51:54,880

driest and the fact that we have

3230

01:51:59,510 --> 01:51:56,880

determined and believe that there's an

3231

01:52:01,669 --> 01:51:59,520

identifiable observable boundary called

3232

01:52:04,550 --> 01:52:01,679

the ydb

3233

01:52:07,750 --> 01:52:04,560

so 70 of 97 sites have a black mat over

3234

01:52:09,430 --> 01:52:07,760

the layer 27 non-mat sites have related

3235

01:52:12,229 --> 01:52:09,440

yd sediment in other words we can go

3236

01:52:14,550 --> 01:52:12,239

down to goodyear's site and find our

3237

01:52:16,470 --> 01:52:14,560

stuff but you do not have a map

3238

01:52:18,870 --> 01:52:16,480

so you didn't get that you didn't get

3239

01:52:20,950 --> 01:52:18,880

that algal mat

3240

01:52:25,910 --> 01:52:20,960

during 2 900 years black matte and ydb

3241

01:52:31,270 --> 01:52:28,550

77 of the 97 sites contained the bones

3242

01:52:34,470 --> 01:52:31,280

of its stink manifold zero

3243

01:52:37,350 --> 01:52:34,480

of the 97 sites contain any bones above

3244

01:52:38,229 --> 01:52:37,360

that layer holy geez

3245

01:52:40,870 --> 01:52:38,239

yeah

3246

01:52:43,270 --> 01:52:40,880

let's see oh i'm getting spooked come on

3247

01:52:45,669 --> 01:52:43,280

baby

3248

01:52:47,030 --> 01:52:45,679

come on

3249

01:52:56,550 --> 01:52:47,040

please don't crash please don't crash

3250

01:53:00,790 --> 01:52:59,189

hold on i'm not going to go back into

3251

01:53:06,229 --> 01:53:00,800

this other thing

3252

01:53:09,669 --> 01:53:07,669

people staying with us

3253

01:53:10,830 --> 01:53:09,679

i'm i'm just i'm just in awe right now

3254

01:53:12,709 --> 01:53:10,840

personally

3255

01:53:14,070 --> 01:53:12,719

it's gonna do i'm gonna switch to this

3256

01:53:16,070 --> 01:53:14,080

other one

3257

01:53:17,510 --> 01:53:16,080

good i'm glad you're liking it um i'm

3258

01:53:21,669 --> 01:53:17,520

gonna go back to

3259

01:53:32,390 --> 01:53:21,679

another version of this for doll

3260

01:53:36,950 --> 01:53:34,790

just uh

3261

01:53:39,990 --> 01:53:36,960

sorry to share my

3262

01:53:42,320 --> 01:53:40,000

innermost computer secrets and everyone

3263

01:53:49,510 --> 01:53:42,330

not the macro

3264

01:53:53,430 --> 01:53:51,270

i just don't want y'all to endure me

3265

01:53:55,030 --> 01:53:53,440

clicking through it again well this is

3266

01:53:56,470 --> 01:53:55,040

also something i'm used to doing you

3267

01:53:58,229 --> 01:53:56,480

know during my tech support days i'm

3268

01:54:01,030 --> 01:53:58,239

just going to switch back to the uh

3269

01:54:02,149 --> 01:54:01,040

you know to our guest box while i'm i'm

3270

01:54:03,830 --> 01:54:02,159

going to put myself back on the big

3271

01:54:06,149 --> 01:54:03,840

screen here

3272

01:54:07,830 --> 01:54:06,159

oh there we go

3273

01:54:11,750 --> 01:54:07,840

yeah i can get it open there but i

3274

01:54:15,270 --> 01:54:13,510

to flip through carefully because i put

3275

01:54:18,070 --> 01:54:15,280

it in this micro mode

3276

01:54:20,629 --> 01:54:18,080

oh wow okay there we go

3277

01:54:22,149 --> 01:54:20,639

hallelujah i know what i did okay yeah

3278

01:54:24,310 --> 01:54:22,159

boy there's just nothing worse but it's

3279

01:54:26,310 --> 01:54:24,320

an informal podcast right

3280

01:54:28,149 --> 01:54:26,320

uh yeah we're pretty uh we're pretty

3281

01:54:29,510 --> 01:54:28,159

relaxed and laid back here

3282

01:54:30,709 --> 01:54:29,520

you know we get things going how are we

3283

01:54:32,709 --> 01:54:30,719

doing for tom

3284

01:54:34,390 --> 01:54:32,719

um let's see we're we're hitting about

3285

01:54:36,790 --> 01:54:34,400

the two hour mark right now so let's see

3286

01:54:39,189 --> 01:54:36,800

we have about maximum about an hour left

3287

01:54:41,189 --> 01:54:39,199

um okay i've got the flat mat stuff for

3288

01:54:42,629 --> 01:54:41,199

you let me jump ahead a little bit okay

3289

01:54:54,070 --> 01:54:42,639

okay

3290

01:54:59,510 --> 01:54:54,080

haven't discussed yet and i think

3291

01:55:02,950 --> 01:55:01,589

the most unusual markers nano diamonds

3292

01:55:04,790 --> 01:55:02,960

and we didn't find that we were about to

3293

01:55:07,830 --> 01:55:04,800

publish the paper and that evidence came

3294

01:55:09,109 --> 01:55:07,840

back so we were in 2007

3295

01:55:10,629 --> 01:55:09,119

right before the paper was published you

3296

01:55:13,109 --> 01:55:10,639

know months these things took a long

3297

01:55:14,950 --> 01:55:13,119

time um

3298

01:55:15,910 --> 01:55:14,960

the the diamond evidence came back and

3299

01:55:17,510 --> 01:55:15,920

these are

3300

01:55:20,790 --> 01:55:17,520

you know un

3301  
01:55:22,709 --> 01:55:20,800  
you know incomprehensibly small

3302  
01:55:25,830 --> 01:55:22,719  
diamond fragments

3303  
01:55:27,270 --> 01:55:25,840  
trillions of them okay

3304  
01:55:29,510 --> 01:55:27,280  
and

3305  
01:55:31,030 --> 01:55:29,520  
very very difficult to produce in nature

3306  
01:55:33,270 --> 01:55:31,040  
most of them

3307  
01:55:38,229 --> 01:55:33,280  
but cube can end diamonds then we also

3308  
01:55:41,669 --> 01:55:39,589  
these are the ways you study and

3309  
01:55:42,950 --> 01:55:41,679  
determine what kind of diamond it is

3310  
01:55:44,470 --> 01:55:42,960  
which can tell you some things and

3311  
01:55:46,550 --> 01:55:44,480  
that's kind of like

3312  
01:55:48,950 --> 01:55:46,560  
shining through it like a prism

3313  
01:55:50,550 --> 01:55:48,960

and then you uh go and look at the

3314

01:55:52,870 --> 01:55:50,560

diffraction pattern and you're able to

3315

01:55:54,310 --> 01:55:52,880

tell what actually is the lattice of the

3316

01:55:56,390 --> 01:55:54,320

carbon within the

3317

01:55:58,149 --> 01:55:56,400

original atoms

3318

01:56:01,189 --> 01:55:58,159

so when you go into look at the carbon

3319

01:56:02,950 --> 01:56:01,199

spherules now this is in the bug poop

3320

01:56:05,750 --> 01:56:02,960

see they didn't go in a dress said it

3321

01:56:08,070 --> 01:56:05,760

was fungus and bug poop fungus bug poop

3322

01:56:09,350 --> 01:56:08,080

yeah but our our original diamond

3323

01:56:10,950 --> 01:56:09,360

evidence was all from the carbon

3324

01:56:12,950 --> 01:56:10,960

sphericals

3325

01:56:15,910 --> 01:56:12,960

okay so that's a hell of a bug that has

3326

01:56:19,189 --> 01:56:15,920

managed a biological mechanism to create

3327

01:56:21,910 --> 01:56:19,199

you know exotic forms of carbon within

3328

01:56:23,990 --> 01:56:21,920

its digestive system

3329

01:56:25,910 --> 01:56:24,000

not to the wand's delight another kind

3330

01:56:27,669 --> 01:56:25,920

of diamond that we found

3331

01:56:29,270 --> 01:56:27,679

it's been disputed and actually by some

3332

01:56:32,149 --> 01:56:29,280

pretty you know some pretty tough guys

3333

01:56:33,669 --> 01:56:32,159

um what's his name um

3334

01:56:35,350 --> 01:56:33,679

oh it'll come to me but but one of our

3335

01:56:39,290 --> 01:56:35,360

credits is great diamond expert he's up

3336

01:56:40,709 --> 01:56:39,300

against us we got him on our side too

3337

01:56:42,709 --> 01:56:40,719

[Music]

3338

01:56:44,470 --> 01:56:42,719

that's lawns to light just looking at

3339

01:56:46,310 --> 01:56:44,480

you kind of get a feel for you know the

3340

01:56:47,910 --> 01:56:46,320

degree of science that was done on this

3341

01:56:49,990 --> 01:56:47,920

stuff there's a lot of pictures taken

3342

01:56:51,589 --> 01:56:50,000

and every one of these thousands and

3343

01:56:54,790 --> 01:56:51,599

thousands of different

3344

01:56:57,189 --> 01:56:54,800

you know attempts at it

3345

01:56:58,550 --> 01:56:57,199

finding it within um well you find it in

3346

01:57:02,310 --> 01:56:58,560

each of them but you have to go through

3347

01:57:06,709 --> 01:57:02,320

a lot a lot a lot of samples

3348

01:57:09,350 --> 01:57:08,070

yeah

3349

01:57:11,430 --> 01:57:09,360

sorry i'm hearing in the background i

3350

01:57:17,510 --> 01:57:11,440

think one of my cats is trying to expel

3351  
01:57:17,520 --> 01:57:22,830  
wow

3352  
01:57:29,830 --> 01:57:25,589  
cats okay

3353  
01:57:31,510 --> 01:57:29,840  
and then very excited to find it

3354  
01:57:32,709 --> 01:57:31,520  
in greenland

3355  
01:57:36,229 --> 01:57:32,719  
okay and this is where that fellow

3356  
01:57:41,030 --> 01:57:39,589  
i am sorry chris i've never had

3357  
01:57:44,420 --> 01:57:41,040  
don't you know the biggest powerpoint

3358  
01:57:44,430 --> 01:57:49,189  
[Music]

3359  
01:57:56,790 --> 01:57:50,870  
at least is two hours in and those

3360  
01:58:03,589 --> 01:58:00,629  
i don't know why i cannot minimize it

3361  
01:58:05,270 --> 01:58:03,599  
okay well if you hit escape

3362  
01:58:06,790 --> 01:58:05,280  
i know i am hitting escape i actually

3363  
01:58:09,030 --> 01:58:06,800

known enough to know that but what

3364

01:58:12,390 --> 01:58:09,040

happened was that the recommendation of

3365

01:58:14,790 --> 01:58:12,400

someone earlier today i put it in this

3366

01:58:16,790 --> 01:58:14,800

show macro

3367

01:58:18,709 --> 01:58:16,800

i think it was still crashing that's why

3368

01:58:20,470 --> 01:58:18,719

i did that so i'm just give me a moment

3369

01:58:22,149 --> 01:58:20,480

here i think i've got your

3370

01:58:25,030 --> 01:58:22,159

um i think i've got

3371

01:58:26,310 --> 01:58:25,040

yeah you've got my

3372

01:58:27,910 --> 01:58:26,320

okay because if you sent it i could

3373

01:58:29,750 --> 01:58:27,920

probably just run it on my on my end and

3374

01:58:31,589 --> 01:58:29,760

just share my screen with you and at

3375

01:58:35,589 --> 01:58:31,599

that point then i can

3376

01:58:37,430 --> 01:58:35,599

you know just do do the fun stuff and uh

3377

01:58:38,629 --> 01:58:37,440

no no it's only

3378

01:58:40,550 --> 01:58:38,639

so right now what i'm doing is i'm

3379

01:58:42,709 --> 01:58:40,560

opening up um it's good powerpoint

3380

01:58:44,070 --> 01:58:42,719

though if you could play it huh

3381

01:58:46,629 --> 01:58:44,080

well let's see here

3382

01:58:49,189 --> 01:58:46,639

[Music]

3383

01:58:51,270 --> 01:58:49,199

okay so i got your uh okay send me that

3384

01:58:52,950 --> 01:58:51,280

today and you sent me that so i'm gonna

3385

01:58:57,030 --> 01:58:52,960

go into

3386

01:59:00,470 --> 01:58:58,950

i can move on to the bays if you like

3387

01:59:02,310 --> 01:59:00,480

but there's some good stuff there at the

3388

01:59:07,750 --> 01:59:02,320

end i'd like to discuss of the recent

3389

01:59:10,870 --> 01:59:09,750

will i be able to see your screen you

3390

01:59:13,350 --> 01:59:10,880

will be able to once i can actually get

3391

01:59:14,709 --> 01:59:13,360

this going i'm just trying to

3392

01:59:18,229 --> 01:59:14,719

uh

3393

01:59:21,430 --> 01:59:18,239

adding to my dropbox now and it's just

3394

01:59:23,589 --> 01:59:21,440

chugging over the wonders of technology

3395

01:59:25,589 --> 01:59:23,599

okay view and which one did you want me

3396

01:59:27,430 --> 01:59:25,599

to which one do you want me to open

3397

01:59:31,300 --> 01:59:27,440

yeah this is um

3398

01:59:36,149 --> 01:59:31,310

macro yd for dol macro yd for dol um

3399

01:59:40,390 --> 01:59:38,950

looking at that is it's in a folder by

3400

01:59:42,149 --> 01:59:40,400

any chance

3401

01:59:46,149 --> 01:59:42,159

yeah it's in

3402

01:59:49,270 --> 01:59:46,950

us

3403

01:59:50,790 --> 01:59:49,280

down of lore and then it's pp drafts

3404

01:59:52,950 --> 01:59:50,800

okay there we go so

3405

01:59:55,430 --> 01:59:52,960

pp drafts mike macro i've got carolina

3406

02:00:02,870 --> 01:59:55,440

base three pro two independent and wide

3407

02:00:05,669 --> 02:00:04,550

cause you can do it that way then we can

3408

02:00:08,149 --> 02:00:05,679

try and

3409

02:00:08,870 --> 02:00:08,159

see you know yeah let me keep it on this

3410

02:00:10,149 --> 02:00:08,880

okay

3411

02:00:12,149 --> 02:00:10,159

that's fine yeah don't don't don't make

3412

02:00:14,870 --> 02:00:12,159

it more

3413

02:00:16,310 --> 02:00:14,880

yeah that's a good good compromise

3414

02:00:18,790 --> 02:00:16,320

okay

3415

02:00:21,750 --> 02:00:18,800

sorry ladies and gentlemen

3416

02:00:23,109 --> 02:00:21,760

uh okay so the ydb layer and sediment

3417

02:00:24,629 --> 02:00:23,119

going through the impacts are there any

3418

02:00:26,149 --> 02:00:24,639

clues to the location i kind of skipped

3419

02:00:27,430 --> 02:00:26,159

over the nano diamond stuff but y'all

3420

02:00:29,430 --> 02:00:27,440

got that

3421

02:00:33,189 --> 02:00:29,440

um

3422

02:00:34,550 --> 02:00:33,199

the distribution of evidence is key okay

3423

02:00:36,629 --> 02:00:34,560

that

3424

02:00:38,709 --> 02:00:36,639

as you can see there

3425

02:00:40,149 --> 02:00:38,719

that's gaining up there which actually

3426  
02:00:43,430 --> 02:00:40,159  
one of the first sites found and the

3427  
02:00:47,270 --> 02:00:43,440  
abundance of all of this stuff

3428  
02:00:48,790 --> 02:00:47,280  
is reduced as one moves away

3429  
02:00:50,470 --> 02:00:48,800  
from

3430  
02:00:53,350 --> 02:00:50,480  
roughly that area around the great lakes

3431  
02:01:00,790 --> 02:00:57,030  
so it goes from 2144

3432  
02:01:02,709 --> 02:01:00,800  
grains per kilogram probably down to 70

3433  
02:01:04,070 --> 02:01:02,719  
401 down to 92

3434  
02:01:05,030 --> 02:01:04,080  
etc

3435  
02:01:07,350 --> 02:01:05,040  
okay

3436  
02:01:09,750 --> 02:01:07,360  
so this a little stuff on the ice sheet

3437  
02:01:12,550 --> 02:01:09,760  
i said things did flow out down south we

3438  
02:01:14,390 --> 02:01:12,560

oh we can't see any of the uh

3439

02:01:16,870 --> 02:01:14,400

any of the animations can we

3440

02:01:19,189 --> 02:01:16,880

lots of evidence so what happened

3441

02:01:21,350 --> 02:01:19,199

okay one one of the critics is this is

3442

02:01:23,750 --> 02:01:21,360

perfectly legitimate stuff said okay so

3443

02:01:25,510 --> 02:01:23,760

did you've got a bunch of ydb evidence

3444

02:01:27,430 --> 02:01:25,520

might it be due to the normal rain of

3445

02:01:29,750 --> 02:01:27,440

meteoritic debris which is falling down

3446

02:01:31,669 --> 02:01:29,760

on us at all times you do have uh

3447

02:01:33,430 --> 02:01:31,679

microspherules iridium

3448

02:01:35,589 --> 02:01:33,440

diamonds all of that stuff and some

3449

02:01:37,430 --> 02:01:35,599

degree is coming in all the time but if

3450

02:01:39,430 --> 02:01:37,440

you go look at the math and say let's go

3451

02:01:42,709 --> 02:01:39,440

ahead and take a a

3452

02:01:46,470 --> 02:01:42,719

a glycial ice core and say the average

3453

02:01:48,870 --> 02:01:46,480

abundance in it in the non ydb layer

3454

02:01:50,709 --> 02:01:48,880

if taken out and put on a square meter

3455

02:01:52,790 --> 02:01:50,719

of i don't know you know how thick that

3456

02:01:56,550 --> 02:01:52,800

was to be but you might find

3457

02:02:00,070 --> 02:01:57,589

one

3458

02:02:01,350 --> 02:02:00,080

uh so you can't play this stuff huh well

3459

02:02:02,790 --> 02:02:01,360

that's fine dude the animation yeah but

3460

02:02:06,870 --> 02:02:02,800

when you get to it you get a whole bunch

3461

02:02:10,229 --> 02:02:06,880

of it right so if you get the summary

3462

02:02:11,910 --> 02:02:10,239

it occurred about 12 000 years ago

3463

02:02:13,510 --> 02:02:11,920

thousands of air bursts of the northern

3464

02:02:14,709 --> 02:02:13,520

hemisphere

3465

02:02:16,149 --> 02:02:14,719

probably with some particularly large

3466

02:02:18,310 --> 02:02:16,159

ones as well that which might have

3467

02:02:19,750 --> 02:02:18,320

kicked out the carolina bay material why

3468

02:02:22,310 --> 02:02:19,760

do the impact on at least four

3469

02:02:25,589 --> 02:02:22,320

continents gotta update that

3470

02:02:29,270 --> 02:02:27,270

square kilometers cubic kilometers of

3471

02:02:31,270 --> 02:02:29,280

laurentide melt water went shooting out

3472

02:02:33,430 --> 02:02:31,280

those northern pathways

3473

02:02:35,030 --> 02:02:33,440

it halted the north atlantic ocean

3474

02:02:36,390 --> 02:02:35,040

circulation and particularly for people

3475

02:02:38,629 --> 02:02:36,400

who don't aren't familiar with this

3476

02:02:41,910 --> 02:02:38,639

subject might be most of them listening

3477

02:02:44,390 --> 02:02:41,920

that the the key here is that it has

3478

02:02:46,550 --> 02:02:44,400

long been accepted in al gore's movie in

3479

02:02:47,910 --> 02:02:46,560

2007 it probably references in the

3480

02:02:49,030 --> 02:02:47,920

recent sequel

3481

02:02:51,669 --> 02:02:49,040

has

3482

02:02:54,310 --> 02:02:51,679

speaks of the well-established science

3483

02:02:55,910 --> 02:02:54,320

well accepted that the yd event happened

3484

02:02:58,070 --> 02:02:55,920

not necessarily the impact but there was

3485

02:03:00,790 --> 02:02:58,080

a tremendous cooling and that cooling

3486

02:03:02,550 --> 02:03:00,800

occurred because there was a huge pulse

3487

02:03:03,990 --> 02:03:02,560

of fresh water

3488

02:03:06,790 --> 02:03:04,000

from canada

3489

02:03:09,189 --> 02:03:06,800

into the northern atlantic ocean and

3490

02:03:10,390 --> 02:03:09,199

that shut down the gulf stream

3491

02:03:14,390 --> 02:03:10,400

so you

3492

02:03:15,589 --> 02:03:14,400

stop that conveyor of warm water to the

3493

02:03:17,589 --> 02:03:15,599

north

3494

02:03:18,790 --> 02:03:17,599

okay and we believe that initiated the

3495

02:03:20,229 --> 02:03:18,800

younger dry ice cooling triggered a

3496

02:03:22,629 --> 02:03:20,239

major adaption

3497

02:03:25,109 --> 02:03:22,639

with with overkill and impact induced

3498

02:03:27,990 --> 02:03:25,119

climate cost the caused the megaphone

3499

02:03:30,550 --> 02:03:28,000

what was an actual impact

3500

02:03:33,030 --> 02:03:30,560

there's the kt dinosaur killer

3501

02:03:35,030 --> 02:03:33,040

okay and look at it you know

3502

02:03:37,990 --> 02:03:35,040

superimposed in florida is pretty uh

3503

02:03:39,510 --> 02:03:38,000

impressive that's a 10 mile kilometer

3504

02:03:41,030 --> 02:03:39,520

wide that's a big boy and that's what

3505

02:03:42,470 --> 02:03:41,040

i'm saying you would see the evidence

3506

02:03:43,910 --> 02:03:42,480

from that first

3507

02:03:45,350 --> 02:03:43,920

that makes sense that was such a

3508

02:03:47,750 --> 02:03:45,360

horrendous

3509

02:03:50,149 --> 02:03:47,760

dramatic distinct

3510

02:03:52,709 --> 02:03:50,159

you know single big

3511

02:03:55,510 --> 02:03:52,719

bang into the earth and then you have

3512

02:03:58,629 --> 02:03:55,520

lesser events that we're aware of too

3513

02:04:00,149 --> 02:03:58,639

this is in 1908 in siberia where a

3514

02:04:03,430 --> 02:04:00,159

thousand square miles of trees i think

3515

02:04:04,790 --> 02:04:03,440

is 80 000 80 million trees

3516

02:04:07,109 --> 02:04:04,800

were

3517

02:04:09,270 --> 02:04:07,119

knocked to the ground and incinerated

3518

02:04:11,669 --> 02:04:09,280

in an instant

3519

02:04:13,270 --> 02:04:11,679

from what is now suspected to be a part

3520

02:04:15,270 --> 02:04:13,280

of the taurid meteor shower which we

3521

02:04:16,870 --> 02:04:15,280

think was responsible for this impact as

3522

02:04:18,790 --> 02:04:16,880

well

3523

02:04:19,750 --> 02:04:18,800

so the impact or what cosmic evidence

3524

02:04:21,990 --> 02:04:19,760

could have produced the evidence there

3525

02:04:24,390 --> 02:04:22,000

are no visible craters no melted impact

3526

02:04:25,830 --> 02:04:24,400

rocks debris across four continents it

3527

02:04:28,070 --> 02:04:25,840

done it's unclear but there's a good

3528

02:04:30,629 --> 02:04:28,080

possibility it's a heavily fragmented

3529

02:04:31,990 --> 02:04:30,639

comet hit the ice sheet so you wouldn't

3530

02:04:34,310 --> 02:04:32,000

find some of the more dramatic

3531

02:04:36,950 --> 02:04:34,320

large-scale evidence that you find in

3532

02:04:38,790 --> 02:04:36,960

the in the kt impact now of this type

3533

02:04:40,310 --> 02:04:38,800

comment the best known probably not

3534

02:04:43,189 --> 02:04:40,320

completely typical

3535

02:04:45,910 --> 02:04:43,199

uh is shoemaker levy and i think we

3536

02:04:48,229 --> 02:04:45,920

remember that from 94 96

3537

02:04:49,750 --> 02:04:48,239

and that was where the impossible

3538

02:04:52,149 --> 02:04:49,760

happened these things that were supposed

3539

02:04:53,669 --> 02:04:52,159

to only happen on scales of time where

3540

02:04:56,310 --> 02:04:53,679

you would not expect to see them we

3541

02:04:59,270 --> 02:04:56,320

actually saw another planet uh

3542

02:05:01,990 --> 02:04:59,280

impacted dramatically with explosions as

3543

02:05:05,510 --> 02:05:02,000

large as the earth itself and watched it

3544

02:05:07,910 --> 02:05:05,520

live happen to jupiter over a period of

3545

02:05:10,229 --> 02:05:07,920

several days

3546

02:05:11,830 --> 02:05:10,239

here's another comment of a similar type

3547

02:05:13,189 --> 02:05:11,840

look at that thing people think of

3548

02:05:15,589 --> 02:05:13,199

comets as

3549

02:05:17,430 --> 02:05:15,599

you know being a big ball out there you

3550

02:05:19,189 --> 02:05:17,440

know the dirty snowball and then it

3551  
02:05:20,709 --> 02:05:19,199  
disappears into the sun or shoots off

3552  
02:05:23,189 --> 02:05:20,719  
you know back into

3553  
02:05:25,990 --> 02:05:23,199  
the outer orbit but no actually what

3554  
02:05:28,550 --> 02:05:26,000  
they do many of them is disintegrate as

3555  
02:05:29,750 --> 02:05:28,560  
they come in and that's uh you can see

3556  
02:05:31,589 --> 02:05:29,760  
all those pieces imagine that

3557  
02:05:33,270 --> 02:05:31,599  
intersecting with earth

3558  
02:05:35,589 --> 02:05:33,280  
here's another one and you can see that

3559  
02:05:37,990 --> 02:05:35,599  
this one's 600 kilometers so you can see

3560  
02:05:40,950 --> 02:05:38,000  
the earth that would have been

3561  
02:05:42,950 --> 02:05:40,960  
this is conor schwarzman walkman 100

3562  
02:05:44,390 --> 02:05:42,960  
large pieces 25 times the distance of

3563  
02:05:46,390 --> 02:05:44,400

the moon and

3564

02:05:47,750 --> 02:05:46,400

600 kilometers that would have been fit

3565

02:05:48,709 --> 02:05:47,760

nicely right there on the ice sheet

3566

02:05:49,750 --> 02:05:48,719

wouldn't it

3567

02:05:51,910 --> 02:05:49,760

right

3568

02:05:54,149 --> 02:05:51,920

or something like that yeah

3569

02:05:55,830 --> 02:05:54,159

but wait there's more so i've gone

3570

02:05:56,870 --> 02:05:55,840

through kind of the science that we

3571

02:05:58,070 --> 02:05:56,880

developed

3572

02:05:59,750 --> 02:05:58,080

now i'm going to go through to some

3573

02:06:01,189 --> 02:05:59,760

independent folks now some of these are

3574

02:06:03,270 --> 02:06:01,199

probably going to get tagged with being

3575

02:06:05,430 --> 02:06:03,280

a part of the team now and having drank

3576

02:06:07,510 --> 02:06:05,440

the kool-aid of some sort or somehow we

3577

02:06:09,750 --> 02:06:07,520

talked them into this but a great

3578

02:06:11,350 --> 02:06:09,760

researcher named christopher moore took

3579

02:06:12,790 --> 02:06:11,360

up the calls

3580

02:06:14,470 --> 02:06:12,800

and

3581

02:06:15,910 --> 02:06:14,480

i wouldn't say he took up the calls he's

3582

02:06:17,510 --> 02:06:15,920

you know level-headed guy it's not a

3583

02:06:20,070 --> 02:06:17,520

cause for him he's just developing

3584

02:06:23,669 --> 02:06:20,080

science but it certainly helped my calls

3585

02:06:25,350 --> 02:06:23,679

and chris went out and did a wonderful

3586

02:06:27,910 --> 02:06:25,360

paper that was published in march of

3587

02:06:30,069 --> 02:06:27,920

this year that got worldwide minor

3588

02:06:30,790 --> 02:06:30,079

attention

3589

02:06:35,669 --> 02:06:30,800

and

3590

02:06:37,990 --> 02:06:35,679

platinum at the younger driest boundary

3591

02:06:40,229 --> 02:06:38,000

we had been looking for iridium

3592

02:06:42,310 --> 02:06:40,239

and he looked for platinum

3593

02:06:44,229 --> 02:06:42,320

and he went back and looked at 11

3594

02:06:47,990 --> 02:06:44,239

different sites

3595

02:06:49,510 --> 02:06:48,000

and it was boom boom boom much easier

3596

02:06:51,510 --> 02:06:49,520

geochemical

3597

02:06:53,910 --> 02:06:51,520

signature than iridium

3598

02:06:56,950 --> 02:06:53,920

that this may have not been an iridium

3599

02:06:59,350 --> 02:06:56,960

rich impactor but it's just as valid

3600

02:07:02,069 --> 02:06:59,360

being a platinum group metal

3601  
02:07:04,470 --> 02:07:02,079  
you have seen it here so platinum has

3602  
02:07:09,030 --> 02:07:04,480  
become to the ydb

3603  
02:07:10,950 --> 02:07:09,040  
as iridium was to the kt dinosaur killer

3604  
02:07:13,510 --> 02:07:10,960  
and this kind of science will probably

3605  
02:07:16,149 --> 02:07:13,520  
take us over the the wall

3606  
02:07:18,069 --> 02:07:16,159  
he has done a wonderful wonderful job

3607  
02:07:19,589 --> 02:07:18,079  
with small business yeah of course this

3608  
02:07:22,550 --> 02:07:19,599  
is this is actually the data that i

3609  
02:07:25,510 --> 02:07:22,560  
presented back in uh back in june

3610  
02:07:27,510 --> 02:07:25,520  
nice yeah that was a big paper yep got a

3611  
02:07:29,430 --> 02:07:27,520  
lot of message yep and you know what one

3612  
02:07:31,270 --> 02:07:29,440  
of the best signs is we didn't get a lot

3613  
02:07:34,069 --> 02:07:31,280

of criticism they didn't come out they

3614

02:07:35,350 --> 02:07:34,079

haven't published a refutation of it

3615

02:07:37,669 --> 02:07:35,360

it's going to be a tough one to beat

3616

02:07:40,069 --> 02:07:37,679

back and it went in nature it was our

3617

02:07:41,430 --> 02:07:40,079

first appearance not in the magazine but

3618

02:07:42,629 --> 02:07:41,440

a nature publication called natural

3619

02:07:43,430 --> 02:07:42,639

reports

3620

02:07:45,510 --> 02:07:43,440

so

3621

02:07:47,189 --> 02:07:45,520

just like conservative tv you know you

3622

02:07:48,550 --> 02:07:47,199

always brag about when you show up in

3623

02:07:49,910 --> 02:07:48,560

the washington when you show up in the

3624

02:07:51,910 --> 02:07:49,920

new york times even though they're

3625

02:07:53,270 --> 02:07:51,920

supposed you know

3626

02:07:55,350 --> 02:07:53,280

those papers are only good if they're

3627

02:07:57,750 --> 02:07:55,360

publishing your stories right

3628

02:07:59,189 --> 02:07:57,760

uh another great one alex andronikov

3629

02:08:00,709 --> 02:07:59,199

mentioned him earlier

3630

02:08:02,709 --> 02:08:00,719

have zero contact with this guy he's

3631

02:08:04,310 --> 02:08:02,719

certainly not on the team well he went

3632

02:08:05,270 --> 02:08:04,320

back to blackwater draw and look what he

3633

02:08:06,709 --> 02:08:05,280

found

3634

02:08:08,629 --> 02:08:06,719

spherules

3635

02:08:10,149 --> 02:08:08,639

abundant and look at those hollow

3636

02:08:11,669 --> 02:08:10,159

cereals the only way that you get a

3637

02:08:13,589 --> 02:08:11,679

hollow spherical

3638

02:08:15,589 --> 02:08:13,599

is in a the kind of event where there's

3639

02:08:18,310 --> 02:08:15,599

tremendous amount of heat

3640

02:08:19,830 --> 02:08:18,320

and a gaseous nature inside of it you

3641

02:08:21,669 --> 02:08:19,840

can kind of picture what happened it

3642

02:08:23,189 --> 02:08:21,679

blows out the little metal cover of it

3643

02:08:24,550 --> 02:08:23,199

right yeah this is one thing that i want

3644

02:08:26,149 --> 02:08:24,560

to be able to mention is that mark

3645

02:08:27,109 --> 02:08:26,159

catalano who's one of our one of our

3646

02:08:29,350 --> 02:08:27,119

master

3647

02:08:30,709 --> 02:08:29,360

uh contributors to patreon and he's been

3648

02:08:32,950 --> 02:08:30,719

with the show for

3649

02:08:34,629 --> 02:08:32,960

basically however long i think

3650

02:08:36,390 --> 02:08:34,639

you know we've been doing it for

3651

02:08:38,069 --> 02:08:36,400

months and months and months uh he lives

3652

02:08:40,069 --> 02:08:38,079

in south carolina and he he's mentioning

3653

02:08:41,910 --> 02:08:40,079

in chat now that he has land that you're

3654

02:08:42,790 --> 02:08:41,920

welcome to conduct studies on

3655

02:08:45,510 --> 02:08:42,800

hey

3656

02:08:47,350 --> 02:08:45,520

great so i'll i'll pass his uh his

3657

02:08:51,189 --> 02:08:47,360

contact info after the show

3658

02:08:52,709 --> 02:08:51,199

happy to converse with him

3659

02:08:54,069 --> 02:08:52,719

that's great

3660

02:08:55,990 --> 02:08:54,079

um

3661

02:08:57,430 --> 02:08:56,000

that was nice i like the way he put this

3662

02:09:01,990 --> 02:08:57,440

i'm sorry that we're seeing the the

3663

02:09:05,750 --> 02:09:03,830

having a crash and drawn across says the

3664

02:09:07,270 --> 02:09:05,760

presence of a high number of hollow

3665

02:09:09,669 --> 02:09:07,280

magnetic shows could be used for

3666

02:09:11,430 --> 02:09:09,679

identification of the ydb same thing

3667

02:09:12,950 --> 02:09:11,440

that that moore said that they're kind

3668

02:09:14,870 --> 02:09:12,960

of coming out backwards trying to say

3669

02:09:17,510 --> 02:09:14,880

you can find this stuff through the

3670

02:09:19,830 --> 02:09:17,520

through finding my proxy in this case uh

3671

02:09:21,589 --> 02:09:19,840

spheres which he found although some

3672

02:09:23,830 --> 02:09:21,599

sign i love i said some scientists

3673

02:09:25,669 --> 02:09:23,840

failed to find any microspherules at all

3674

02:09:27,430 --> 02:09:25,679

that's one of our chief critics cervel

3675

02:09:29,830 --> 02:09:27,440

others reported strongly elevated

3676  
02:09:33,270 --> 02:09:29,840  
concentrations so then he had to he said

3677  
02:09:36,310 --> 02:09:33,280  
she said our observations confirm those

3678  
02:09:38,870 --> 02:09:36,320  
made by firestone and lacombe in spite

3679  
02:09:41,189 --> 02:09:38,880  
of i love it says again the failure to

3680  
02:09:43,109 --> 02:09:41,199  
find any microspherules by cerebelle

3681  
02:09:44,629 --> 02:09:43,119  
reported blah blah blah such a

3682  
02:09:47,669 --> 02:09:44,639  
distribution now what happened with

3683  
02:09:49,109 --> 02:09:47,679  
suravell and i saw it when in wyoming

3684  
02:09:51,669 --> 02:09:49,119  
when we went to this conference and said

3685  
02:09:53,510 --> 02:09:51,679  
it'll be our last conference

3686  
02:09:55,030 --> 02:09:53,520  
he was criticizing he said he had just

3687  
02:09:56,470 --> 02:09:55,040  
done a study that he published it when

3688  
02:09:58,229 --> 02:09:56,480

published at the time he said i didn't

3689

02:09:59,990 --> 02:09:58,239

find anything

3690

02:10:01,669 --> 02:10:00,000

malcolm lecompte or one of those guys

3691

02:10:04,470 --> 02:10:01,679

questioned him it turned out he didn't

3692

02:10:05,589 --> 02:10:04,480

size sort

3693

02:10:08,709 --> 02:10:05,599

the

3694

02:10:10,550 --> 02:10:08,719

micro materials that he was looking for

3695

02:10:12,310 --> 02:10:10,560

tennis balls

3696

02:10:20,069 --> 02:10:12,320

in

3697

02:10:21,750 --> 02:10:20,079

you've got to sort out all the beach

3698

02:10:23,669 --> 02:10:21,760

balls or all you're going to be doing is

3699

02:10:26,069 --> 02:10:23,679

finding beach balls and never run into

3700

02:10:28,870 --> 02:10:26,079

it he didn't size sort it so it was a

3701

02:10:30,470 --> 02:10:28,880

lab protocol mistake and you'll find

3702

02:10:32,069 --> 02:10:30,480

this in french science says oh you just

3703

02:10:36,310 --> 02:10:32,079

didn't do the study right but it is

3704

02:10:39,109 --> 02:10:36,320

absolutely and lecompte in 2012

3705

02:10:40,870 --> 02:10:39,119

did a paper that absolutely nailed him

3706

02:10:43,910 --> 02:10:40,880

and when we pointed that out at the

3707

02:10:47,189 --> 02:10:43,920

conference he hung his head

3708

02:10:51,510 --> 02:10:47,199

clearly knew he had done it incorrectly

3709

02:10:53,589 --> 02:10:51,520

okay and i hadn't seen the uh

3710

02:10:54,790 --> 02:10:53,599

straightened out report and uh admission

3711

02:10:57,350 --> 02:10:54,800

of failure

3712

02:11:00,229 --> 02:10:57,360

just last week this was a big one

3713

02:11:02,470 --> 02:11:00,239

this is last week isabelle ezrade

3714

02:11:04,149 --> 02:11:02,480

alacantara published a page for

3715

02:11:08,390 --> 02:11:04,159

revealing proxy and rich whitey black

3716

02:11:09,910 --> 02:11:08,400

mats at five sites in mexico great paper

3717

02:11:11,669 --> 02:11:09,920

if you put it up on your website if we

3718

02:11:13,189 --> 02:11:11,679

ever get this thing up there uh people

3719

02:11:14,709 --> 02:11:13,199

can go click that link and go read the

3720

02:11:17,350 --> 02:11:14,719

actual paper

3721

02:11:18,229 --> 02:11:17,360

uh there's uh miss alicantara right

3722

02:11:21,910 --> 02:11:18,239

there

3723

02:11:24,149 --> 02:11:21,920

black mats

3724

02:11:26,390 --> 02:11:24,159

boom boom boom boom boom enriched with

3725

02:11:27,750 --> 02:11:26,400

properties five new sites in mexico

3726

02:11:29,270 --> 02:11:27,760

that's awesome

3727

02:11:30,550 --> 02:11:29,280

yeah

3728

02:11:32,069 --> 02:11:30,560

um

3729

02:11:34,229 --> 02:11:32,079

and i'll take you on the wild side you

3730

02:11:35,910 --> 02:11:34,239

probably heard about the uh

3731

02:11:38,069 --> 02:11:35,920

swetman um

3732

02:11:41,510 --> 02:11:38,079

it's a greek name tough to say uh

3733

02:11:43,510 --> 02:11:41,520

tiskretus uh their paper

3734

02:11:45,830 --> 02:11:43,520

that is a totally speculative

3735

02:11:47,750 --> 02:11:45,840

interpretation you know

3736

02:11:48,950 --> 02:11:47,760

even though he's got some good odds

3737

02:11:53,030 --> 02:11:48,960

behind him that it couldn't happen any

3738

02:11:55,589 --> 02:11:53,040

other way that pillar 43 at gobekli tepe

3739

02:11:56,950 --> 02:11:55,599

has a arrangement of constellations that

3740

02:11:59,030 --> 02:11:56,960

suggests

3741

02:12:00,950 --> 02:11:59,040

that they were warning us of this time

3742

02:12:03,910 --> 02:12:00,960

it's so i've presented that paper

3743

02:12:07,109 --> 02:12:03,920

alongside the the one

3744

02:12:08,870 --> 02:12:07,119

not the andronikov um the yeah

3745

02:12:12,229 --> 02:12:08,880

uh christopher moore i presented that

3746

02:12:15,109 --> 02:12:12,239

paper alongside with this one and um

3747

02:12:16,390 --> 02:12:15,119

again i i talked to laird's script

3748

02:12:17,750 --> 02:12:16,400

no yeah it was like it was three hours

3749

02:12:19,669 --> 02:12:17,760

of me just talking nonstop it was

3750

02:12:21,510 --> 02:12:19,679

fantastic my voice was dead by the end

3751

02:12:24,069 --> 02:12:21,520

of it but

3752

02:12:26,390 --> 02:12:24,079

i've talked to people who uh deal with

3753

02:12:28,629 --> 02:12:26,400

comparative cosmology and uh you know

3754

02:12:29,830 --> 02:12:28,639

comparative symbol like symbolism in

3755

02:12:30,790 --> 02:12:29,840

different cultures

3756

02:12:33,350 --> 02:12:30,800

and

3757

02:12:35,589 --> 02:12:33,360

you know some of the most renowned um

3758

02:12:38,149 --> 02:12:35,599

people on the field or in the field such

3759

02:12:40,629 --> 02:12:38,159

as laird scranton uh you know he state

3760

02:12:42,550 --> 02:12:40,639

like at least his position on it is you

3761

02:12:44,709 --> 02:12:42,560

know like sure like it's possible but he

3762

02:12:47,109 --> 02:12:44,719

doesn't necessarily think it is that

3763

02:12:49,030 --> 02:12:47,119

because there is so little of the site

3764

02:12:50,870 --> 02:12:49,040

that's actually been uncovered

3765

02:12:53,030 --> 02:12:50,880

that it seems like it it's more of

3766

02:12:54,470 --> 02:12:53,040

they're trying to put a you know that

3767

02:12:56,950 --> 02:12:54,480

square peg into that round hole to try

3768

02:12:59,270 --> 02:12:56,960

and make it fit whereas it may not even

3769

02:13:01,430 --> 02:12:59,280

be related to that necessarily

3770

02:13:02,790 --> 02:13:01,440

yeah they might be square packing it but

3771

02:13:04,229 --> 02:13:02,800

he does some and i haven't had a chance

3772

02:13:05,750 --> 02:13:04,239

to talk to him but i've corresponded

3773

02:13:08,390 --> 02:13:05,760

some with sweatman

3774

02:13:12,709 --> 02:13:08,400

and what they rely on is just the chance

3775

02:13:14,550 --> 02:13:12,719

occurrence if you accept that those are

3776

02:13:17,350 --> 02:13:14,560

you know for instance the scorpion there

3777

02:13:19,189 --> 02:13:17,360

let's say it's scorpio okay

3778

02:13:20,390 --> 02:13:19,199

which looks just like a modern score pad

3779

02:13:23,350 --> 02:13:20,400

now there are a lot of people who just

3780

02:13:25,270 --> 02:13:23,360

don't accept that the constellation

3781

02:13:26,709 --> 02:13:25,280

identifications and their you know

3782

02:13:29,030 --> 02:13:26,719

connection with certain animals went

3783

02:13:31,270 --> 02:13:29,040

back this far that that's verboten to

3784

02:13:32,790 --> 02:13:31,280

even say okay

3785

02:13:34,870 --> 02:13:32,800

you know it's mostly around the the

3786

02:13:37,910 --> 02:13:34,880

dating could have been off

3787

02:13:39,510 --> 02:13:37,920

um based on their their own solarium um

3788

02:13:41,669 --> 02:13:39,520

uh you know their own use of the

3789

02:13:43,669 --> 02:13:41,679

solarium within within this

3790

02:13:45,910 --> 02:13:43,679

uh you know this range again i'm i'm

3791

02:13:47,589 --> 02:13:45,920

open-minded on the matter myself yeah

3792

02:13:50,149 --> 02:13:47,599

yeah well it's controversial and it's

3793

02:13:52,709 --> 02:13:50,159

speculative the odds if he's right that

3794

02:13:53,750 --> 02:13:52,719

those asterisms match those con those

3795

02:13:55,030 --> 02:13:53,760

figures

3796

02:13:57,510 --> 02:13:55,040

then it is

3797

02:13:58,390 --> 02:13:57,520

a coincidence too great to

3798

02:14:00,629 --> 02:13:58,400

ignore

3799

02:14:02,390 --> 02:14:00,639

the question is do those symbols

3800

02:14:04,069 --> 02:14:02,400

represent the constellations that he

3801

02:14:06,550 --> 02:14:04,079

says they do

3802

02:14:08,149 --> 02:14:06,560

and you'll see up the top those handbags

3803

02:14:09,589 --> 02:14:08,159

that you see you know the assyrians

3804

02:14:13,030 --> 02:14:09,599

carrying around that that graham has

3805

02:14:14,550 --> 02:14:13,040

such a good time with um love that and

3806

02:14:16,390 --> 02:14:14,560

finally probably to somebody with great

3807

02:14:19,109 --> 02:14:16,400

relief there are some links

3808

02:14:20,390 --> 02:14:19,119

that um i think is you know good stuff

3809

02:14:21,750 --> 02:14:20,400

we call ourselves now the comment

3810

02:14:24,629 --> 02:14:21,760

research group we've got our own web

3811

02:14:26,149 --> 02:14:24,639

page it's actually pretty darn slick

3812

02:14:28,550 --> 02:14:26,159

and it's got all the publications and

3813

02:14:29,910 --> 02:14:28,560

you can find them all there please join

3814

02:14:31,589 --> 02:14:29,920

our facebook group should have maybe

3815

02:14:32,550 --> 02:14:31,599

said that earlier that always sounds so

3816

02:14:34,790 --> 02:14:32,560

tacky

3817

02:14:36,470 --> 02:14:34,800

uh this is a youtube channel that i have

3818

02:14:38,629 --> 02:14:36,480

myself that i've just kind of collected

3819

02:14:41,109 --> 02:14:38,639

so just a playlist

3820

02:14:43,830 --> 02:14:41,119

there is one of the last remaining uh

3821

02:14:45,270 --> 02:14:43,840

pbs nova

3822

02:14:47,830 --> 02:14:45,280

points where you can go see that what

3823

02:14:49,750 --> 02:14:47,840

they did our critics chris

3824

02:14:51,510 --> 02:14:49,760

we do not know but we suspect who i

3825

02:14:53,350 --> 02:14:51,520

wouldn't when one dare say the name

3826

02:14:56,390 --> 02:14:53,360

because i don't know but we know our

3827

02:14:58,870 --> 02:14:56,400

critics went to wgbh boston

3828

02:15:01,189 --> 02:14:58,880

leaned on them said you have done

3829

02:15:03,350 --> 02:15:01,199

something on phony science

3830

02:15:06,550 --> 02:15:03,360

and they stopped

3831

02:15:11,589 --> 02:15:06,560

streaming and releasing the nova

3832

02:15:15,750 --> 02:15:13,430

i mean that i tell you

3833

02:15:17,510 --> 02:15:15,760

you know and that was 2010 that's again

3834

02:15:19,510 --> 02:15:17,520

why i started that i said you can't get

3835

02:15:22,470 --> 02:15:19,520

this information out anymore the even

3836

02:15:23,589 --> 02:15:22,480

pbs has to pull it back because somehow

3837

02:15:26,629 --> 02:15:23,599

you know somebody comes out with a

3838

02:15:27,830 --> 02:15:26,639

three-page paper that says it's bug poop

3839

02:15:30,390 --> 02:15:27,840

yeah

3840

02:15:32,149 --> 02:15:30,400

so uh there's the first paper great

3841

02:15:34,390 --> 02:15:32,159

paper that one by vance haynes on the

3842

02:15:36,550 --> 02:15:34,400

black mat here's the bug poop paper you

3843

02:15:38,310 --> 02:15:36,560

can see how sorry it is another shot

3844

02:15:41,589 --> 02:15:38,320

they took at the spherules

3845

02:15:44,709 --> 02:15:41,599

there's the requiem and the just for one

3846

02:15:47,270 --> 02:15:44,719

refutation of their critiques read that

3847

02:15:48,709 --> 02:15:47,280

one right there then they absolutely

3848

02:15:51,270 --> 02:15:48,719

blow them away and of course there's my

3849

02:15:52,709 --> 02:15:51,280

website there

3850

02:15:54,790 --> 02:15:52,719

email me those links and i'll add them

3851  
02:15:55,830 --> 02:15:54,800  
to the to the show notes i will buddy

3852  
02:15:57,830 --> 02:15:55,840  
that's part of the reason i put it

3853  
02:15:59,270 --> 02:15:57,840  
together okay fantastic

3854  
02:16:00,229 --> 02:15:59,280  
sure did

3855  
02:16:01,750 --> 02:16:00,239  
okay

3856  
02:16:02,790 --> 02:16:01,760  
now to be able to kind of finish things

3857  
02:16:04,790 --> 02:16:02,800  
off because i know that we've got a

3858  
02:16:08,069 --> 02:16:04,800  
little bit of time here um if you want

3859  
02:16:09,669 --> 02:16:08,079  
to uh i've got you back over on my go

3860  
02:16:11,510 --> 02:16:09,679  
have myself back over on the big screen

3861  
02:16:14,470 --> 02:16:11,520  
here uh while you get yourself

3862  
02:16:17,270 --> 02:16:14,480  
reorganized in terms of screen share

3863  
02:16:18,790 --> 02:16:17,280

um what can we talk about the carolina

3864

02:16:20,629 --> 02:16:18,800

bays can we can we go through that

3865

02:16:22,229 --> 02:16:20,639

quickly over the next like 20 minutes or

3866

02:16:23,750 --> 02:16:22,239

so before i yeah i got to show them that

3867

02:16:25,350 --> 02:16:23,760

you know they're all a visual thing if

3868

02:16:26,470 --> 02:16:25,360

people haven't seen it before it's one

3869

02:16:28,470 --> 02:16:26,480

of the most astonishing things

3870

02:16:29,830 --> 02:16:28,480

regardless of the calls

3871

02:16:31,109 --> 02:16:29,840

and one of the things that suggests to

3872

02:16:32,950 --> 02:16:31,119

me that there's something weird going on

3873

02:16:35,349 --> 02:16:32,960

there's no sophie people are even aware

3874

02:16:36,469 --> 02:16:35,359

of them and you know a good

3875

02:16:41,270 --> 02:16:36,479

100

3876

02:16:42,150 --> 02:16:41,280

reason 196 my head you know lives within

3877

02:16:44,309 --> 02:16:42,160

a

3878

02:16:47,030 --> 02:16:44,319

hour's drive of these things you know

3879

02:16:47,990 --> 02:16:47,040

now also um just this is coming from

3880

02:16:50,709 --> 02:16:48,000

leave

3881

02:16:51,830 --> 02:16:50,719

vel veltman from youtube chat and he's

3882

02:16:53,830 --> 02:16:51,840

curious about your opinion on the

3883

02:16:55,509 --> 02:16:53,840

kensington and other rune stones found

3884

02:16:57,429 --> 02:16:55,519

throughout missouri and uh oklahoma

3885

02:17:00,309 --> 02:16:57,439

oklahoma

3886

02:17:01,910 --> 02:17:00,319

that's a lot more recent stuff but no i

3887

02:17:04,469 --> 02:17:01,920

do believe there were transatlantic

3888

02:17:08,389 --> 02:17:04,479

journeys by historical cultures into the

3889

02:17:10,549 --> 02:17:08,399

u.s i'm not sure which evidence you know

3890

02:17:12,629 --> 02:17:10,559

is valid which is not i bet there's a

3891

02:17:15,509 --> 02:17:12,639

lot of fakery in it

3892

02:17:16,950 --> 02:17:15,519

but i think it is absolutely impossible

3893

02:17:20,150 --> 02:17:16,960

that

3894

02:17:22,790 --> 02:17:20,160

civilizations did not accidentally or on

3895

02:17:24,950 --> 02:17:22,800

occasion make it over here did they

3896

02:17:29,589 --> 02:17:24,960

leave behind you know

3897

02:17:32,230 --> 02:17:29,599

uh scandinavian um uh uh alphabet

3898

02:17:34,950 --> 02:17:32,240

uh uh carved rocks i can't tell you but

3899

02:17:39,509 --> 02:17:34,960

i do i i believe in that stuff more so

3900

02:17:41,429 --> 02:17:39,519

than ufos well there is evidence of

3901

02:17:43,589 --> 02:17:41,439

scandinavian

3902

02:17:45,750 --> 02:17:43,599

migration into northern you know into

3903

02:17:47,509 --> 02:17:45,760

northern canada and yeah

3904

02:17:49,429 --> 02:17:47,519

as well as

3905

02:17:50,629 --> 02:17:49,439

you know newfoundland so how they

3906

02:17:52,870 --> 02:17:50,639

couldn't have

3907

02:17:54,870 --> 02:17:52,880

gone down the coast is beyond me

3908

02:17:56,709 --> 02:17:54,880

that's right but particularly over you

3909

02:17:58,230 --> 02:17:56,719

know many many years being seafaring

3910

02:18:00,389 --> 02:17:58,240

people like that yeah

3911

02:18:01,910 --> 02:18:00,399

i mean um i don't know it's not at all

3912

02:18:04,070 --> 02:18:01,920

out of the question it's just which one

3913

02:18:05,509 --> 02:18:04,080

was carved by a great granddad on the

3914

02:18:07,030 --> 02:18:05,519

weekend you know and i bet some of that

3915

02:18:08,230 --> 02:18:07,040

stuff went on there are a lot of

3916

02:18:10,230 --> 02:18:08,240

scandinavians out there that want to

3917

02:18:11,669 --> 02:18:10,240

prove an ancient heritage there was

3918

02:18:13,270 --> 02:18:11,679

probably some fakery there's probably a

3919

02:18:15,990 --> 02:18:13,280

lot of real stuff it's just hard to sort

3920

02:18:17,190 --> 02:18:16,000

out okay well that's good to know

3921

02:18:18,709 --> 02:18:17,200

okay let's look at our first picture of

3922

02:18:20,309 --> 02:18:18,719

a carolina bay and keep our fingers

3923

02:18:21,910 --> 02:18:20,319

crossed this thing done crashes not as

3924

02:18:23,190 --> 02:18:21,920

long as the other presentation folks i

3925

02:18:24,709 --> 02:18:23,200

promise you

3926

02:18:26,709 --> 02:18:24,719

carolina bays i refer to him as the

3927

02:18:28,469 --> 02:18:26,719

crazy aunt in the attic of geologists

3928

02:18:30,389 --> 02:18:28,479

where they know she's there

3929

02:18:32,150 --> 02:18:30,399

they've got to accept that they cannot

3930

02:18:34,230 --> 02:18:32,160

kill her but they're embarrassed of her

3931

02:18:35,990 --> 02:18:34,240

and they do not want to speak of her

3932

02:18:38,150 --> 02:18:36,000

okay

3933

02:18:39,910 --> 02:18:38,160

but she is right upstairs and always on

3934

02:18:42,629 --> 02:18:39,920

the top of their minds if they are you

3935

02:18:43,910 --> 02:18:42,639

know uh near surface geologists in in

3936

02:18:45,110 --> 02:18:43,920

this area

3937

02:18:47,669 --> 02:18:45,120

a lot of people say there are half

3938

02:18:49,110 --> 02:18:47,679

million it's more like about 50 000

3939

02:18:50,309 --> 02:18:49,120

they're found from georgia to long

3940

02:18:52,469 --> 02:18:50,319

island and i'll take you a little

3941

02:18:55,349 --> 02:18:52,479

further than that in a moment

3942

02:18:57,030 --> 02:18:55,359

and which is all stuff we developed uh

3943

02:18:58,870 --> 02:18:57,040

in the wider group including some folks

3944

02:19:01,030 --> 02:18:58,880

i introduced you to here mostly in the

3945

02:19:02,549 --> 02:19:01,040

carolinas highest concentration is you

3946

02:19:04,629 --> 02:19:02,559

know between myrtle beach and wilmington

3947

02:19:06,790 --> 02:19:04,639

north carolina and london where they're

3948

02:19:09,030 --> 02:19:06,800

absolutely everywhere make up

3949

02:19:10,790 --> 02:19:09,040

and you know 60 70 percent of some

3950

02:19:12,870 --> 02:19:10,800

counties are bays

3951

02:19:14,549 --> 02:19:12,880

most are dry or drained people don't

3952

02:19:16,230 --> 02:19:14,559

understand that they think i'm a lot of

3953

02:19:18,629 --> 02:19:16,240

times as the lakes because those are the

3954

02:19:20,150 --> 02:19:18,639

very visible ones but uh as you come to

3955

02:19:21,669 --> 02:19:20,160

dome through lidar it turns out that

3956

02:19:23,589 --> 02:19:21,679

most of them are wet

3957

02:19:24,790 --> 02:19:23,599

this was the picture that kicked off the

3958

02:19:26,469 --> 02:19:24,800

debate

3959

02:19:28,709 --> 02:19:26,479

okay

3960

02:19:31,349 --> 02:19:28,719

and that was in 1930 during some of the

3961

02:19:32,150 --> 02:19:31,359

first aerial surveys

3962

02:19:34,309 --> 02:19:32,160

of

3963

02:19:36,309 --> 02:19:34,319

uh in the u.s and they're probably doing

3964

02:19:38,870 --> 02:19:36,319

it nationwide it was the first time they

3965

02:19:41,910 --> 02:19:38,880

had pieced together top-down aerial

3966

02:19:44,070 --> 02:19:41,920

photo photographs in south carolina holy

3967

02:19:45,589 --> 02:19:44,080

[h\_\_h] and literally the story goes you

3968

02:19:46,790 --> 02:19:45,599

know they brought them back got them

3969

02:19:49,030 --> 02:19:46,800

developed

3970

02:19:51,670 --> 02:19:49,040

laid them out on the table and people

3971

02:19:54,950 --> 02:19:51,680

went oh my god

3972

02:19:58,150 --> 02:19:54,960

because a carolina bay cannot be readily

3973

02:20:00,150 --> 02:19:58,160

identified from the ground if you don't

3974

02:20:02,389 --> 02:20:00,160

know what you're looking for

3975

02:20:05,349 --> 02:20:02,399

so back in the day before you could see

3976

02:20:07,590 --> 02:20:05,359

top down if your ant-man like we all are

3977

02:20:09,429 --> 02:20:07,600

walking on a 2d surface

3978

02:20:11,590 --> 02:20:09,439

these are very subtle changes you will

3979

02:20:13,670 --> 02:20:11,600

see the white sand of the rim and then

3980

02:20:15,910 --> 02:20:13,680

you will see a swamp

3981

02:20:17,910 --> 02:20:15,920

you may on the wetter ones do you may

3982

02:20:19,030 --> 02:20:17,920

even walk around the rim and notice that

3983

02:20:20,389 --> 02:20:19,040

it's circular

3984

02:20:21,990 --> 02:20:20,399

sorry for the interruption uh do you

3985

02:20:22,870 --> 02:20:22,000

have quality do you have coordinates for

3986

02:20:25,110 --> 02:20:22,880

this

3987

02:20:26,950 --> 02:20:25,120

that's in myrtle beach myrtle beach okay

3988

02:20:28,309 --> 02:20:26,960

yeah it'll be a lot of canadians up down

3989

02:20:30,469 --> 02:20:28,319

there

3990

02:20:33,030 --> 02:20:30,479

my father

3991

02:20:35,750 --> 02:20:33,040

it's called the carolina bays parkway

3992

02:20:37,670 --> 02:20:35,760

wow brand new

3993

02:20:39,190 --> 02:20:37,680

so that was the image that kicked off

3994

02:20:41,990 --> 02:20:39,200

the debate okay let me have a little fun

3995

02:20:43,510 --> 02:20:42,000

here i took this picture

3996

02:20:48,550 --> 02:20:43,520

so you don't see them right away but

3997

02:20:56,630 --> 02:20:51,270

see they're everywhere

3998

02:21:00,309 --> 02:20:58,389

is that sound coming through

3999

02:21:02,630 --> 02:21:00,319

that's doing pretty well oh it's coming

4000

02:21:03,510 --> 02:21:02,640

through well i i've got my fan on here

4001  
02:21:06,710 --> 02:21:03,520  
but

4002  
02:21:08,230 --> 02:21:06,720  
that is intense

4003  
02:21:09,990 --> 02:21:08,240  
wow

4004  
02:21:11,830 --> 02:21:10,000  
isn't that cool

4005  
02:21:14,150 --> 02:21:11,840  
okay a little short history of base

4006  
02:21:16,790 --> 02:21:14,160  
scholarship you got uh four different

4007  
02:21:19,349 --> 02:21:16,800  
kinds of you know wind and water i'm

4008  
02:21:21,750 --> 02:21:19,359  
going to combine those et and kind of

4009  
02:21:22,870 --> 02:21:21,760  
colorful explanations

4010  
02:21:24,469 --> 02:21:22,880  
um

4011  
02:21:26,389 --> 02:21:24,479  
you got a lot of researchers what

4012  
02:21:28,790 --> 02:21:26,399  
happened was when they first came back

4013  
02:21:30,550 --> 02:21:28,800

with this picture

4014

02:21:34,070 --> 02:21:30,560

like i said when i was telling the story

4015

02:21:36,870 --> 02:21:34,080

oh [h\_\_h] about uh my uh old senator boss

4016

02:21:38,870 --> 02:21:36,880

right it captured the nation's attention

4017

02:21:40,389 --> 02:21:38,880

and one of my goals is to live long

4018

02:21:41,830 --> 02:21:40,399

enough to see it again capture the

4019

02:21:44,070 --> 02:21:41,840

nation's intention because it's just as

4020

02:21:46,070 --> 02:21:44,080

interesting it was in 1930s but

4021

02:21:48,550 --> 02:21:46,080

everybody's forgotten about it and

4022

02:21:51,270 --> 02:21:48,560

people rushed into the field back then

4023

02:21:53,670 --> 02:21:51,280

particularly melton and schreiber these

4024

02:21:56,230 --> 02:21:53,680

guys from university of oklahoma and

4025

02:21:58,469 --> 02:21:56,240

they believed it was from space

4026  
02:22:00,309 --> 02:21:58,479  
and that was extremely controversial

4027  
02:22:01,349 --> 02:22:00,319  
then well this is one of the things that

4028  
02:22:02,870 --> 02:22:01,359  
that always

4029  
02:22:04,870 --> 02:22:02,880  
surprises me about this is that people

4030  
02:22:06,630 --> 02:22:04,880  
will focus on the scat like well carlson

4031  
02:22:08,150 --> 02:22:06,640  
he'll focus on the scab lands

4032  
02:22:09,349 --> 02:22:08,160  
and you know like more like the the

4033  
02:22:11,190 --> 02:22:09,359  
mississippi

4034  
02:22:13,190 --> 02:22:11,200  
um and you know

4035  
02:22:15,270 --> 02:22:13,200  
like those large um

4036  
02:22:17,510 --> 02:22:15,280  
uh tributaries that that brought all

4037  
02:22:19,510 --> 02:22:17,520  
this water down from northern yeah from

4038  
02:22:22,389 --> 02:22:19,520

canada yeah yeah the columbia skyline

4039

02:22:24,230 --> 02:22:22,399

yeah and they don't look at the carolina

4040

02:22:28,630 --> 02:22:24,240

bays as possible being part of that or

4041

02:22:30,550 --> 02:22:28,640

if they do it's not mentioned as often

4042

02:22:32,230 --> 02:22:30,560

that's right and what it is and that's

4043

02:22:34,309 --> 02:22:32,240

okay you know it's it's all getting out

4044

02:22:37,190 --> 02:22:34,319

there and it can't all go at once

4045

02:22:39,030 --> 02:22:37,200

that uh that's randall's um baby up

4046

02:22:40,150 --> 02:22:39,040

there you know he is in georgia so i'm

4047

02:22:41,429 --> 02:22:40,160

kind of surprised he doesn't do a little

4048

02:22:42,630 --> 02:22:41,439

bit more for the base but you gotta

4049

02:22:44,150 --> 02:22:42,640

handle what you handle and he took

4050

02:22:45,990 --> 02:22:44,160

graham out there

4051

02:22:47,830 --> 02:22:46,000

and that's fascinating it's well

4052

02:22:49,429 --> 02:22:47,840

published and it's well accepted that it

4053

02:22:50,950 --> 02:22:49,439

was a tremendous cataclysm now now

4054

02:22:53,429 --> 02:22:50,960

they've broken it down into a number of

4055

02:22:56,389 --> 02:22:53,439

floods and i can dispute that

4056

02:22:57,750 --> 02:22:56,399

uh to some degree and some do

4057

02:22:59,670 --> 02:22:57,760

but

4058

02:23:02,150 --> 02:22:59,680

the the that's randall's gig and that's

4059

02:23:03,590 --> 02:23:02,160

a fine fine gig and he does a great job

4060

02:23:05,110 --> 02:23:03,600

with it everybody should probably

4061

02:23:07,030 --> 02:23:05,120

understand that story even before they

4062

02:23:08,630 --> 02:23:07,040

understand the bays you know but the

4063

02:23:09,990 --> 02:23:08,640

bay's people just need that even if you

4064

02:23:12,469 --> 02:23:10,000

don't understand them need to be aware

4065

02:23:14,630 --> 02:23:12,479

of them now so you had a t when i say t

4066

02:23:17,190 --> 02:23:14,640

and et that's terrestrial formation or

4067

02:23:19,830 --> 02:23:17,200

extraterrestrial formation right

4068

02:23:21,110 --> 02:23:19,840

and it was a back and forth publishing

4069

02:23:23,349 --> 02:23:21,120

war

4070

02:23:25,910 --> 02:23:23,359

the likes of which few subjects saw

4071

02:23:28,870 --> 02:23:25,920

during that time i mean it was

4072

02:23:30,230 --> 02:23:28,880

down and dirty but very respectful very

4073

02:23:32,950 --> 02:23:30,240

gentlemanly i shouldn't say down and

4074

02:23:34,950 --> 02:23:32,960

dirty but it was heated okay

4075

02:23:36,630 --> 02:23:34,960

between these guys who said it was

4076  
02:23:38,230 --> 02:23:36,640  
created by something from above and

4077  
02:23:40,230 --> 02:23:38,240  
other people said it was created over

4078  
02:23:41,750 --> 02:23:40,240  
long periods of time by wind and waves

4079  
02:23:43,990 --> 02:23:41,760  
and water there's no way that's made

4080  
02:23:46,550 --> 02:23:44,000  
from wind and waves and water i know it

4081  
02:23:48,870 --> 02:23:46,560  
just intuitively doesn't it scream that

4082  
02:23:51,830 --> 02:23:48,880  
but you know and one of my favorite the

4083  
02:23:55,510 --> 02:23:51,840  
biggest proponent of the et theory

4084  
02:23:58,550 --> 02:23:55,520  
who worked on it from 34 to 49 and died

4085  
02:24:01,190 --> 02:23:58,560  
with his pen in his hand and his

4086  
02:24:04,030 --> 02:24:01,200  
secretary published the manuscript he

4087  
02:24:07,190 --> 02:24:04,040  
was working on and had just finished

4088  
02:24:08,870 --> 02:24:07,200

posthumously with a beautiful note

4089

02:24:11,190 --> 02:24:08,880

that said that this was the last thing

4090

02:24:13,030 --> 02:24:11,200

dr praty was working on and he was chair

4091

02:24:15,110 --> 02:24:13,040

of the department of geology at the

4092

02:24:17,670 --> 02:24:15,120

university of north carolina that dates

4093

02:24:20,870 --> 02:24:17,680

back to the 1800s it's a fine fine

4094

02:24:24,710 --> 02:24:20,880

department he was chair of it and swore

4095

02:24:26,790 --> 02:24:24,720

literally literally until his dying day

4096

02:24:28,870 --> 02:24:26,800

that these things came from above and

4097

02:24:31,429 --> 02:24:28,880

happened all at the same time

4098

02:24:33,910 --> 02:24:31,439

if you go over to carolina now press and

4099

02:24:36,469 --> 02:24:33,920

go to the geology department

4100

02:24:38,309 --> 02:24:36,479

if you can get past the giggles you can

4101

02:24:40,230 --> 02:24:38,319

find one or two people who think

4102

02:24:43,429 --> 02:24:40,240

something's up on these things but they

4103

02:24:46,150 --> 02:24:43,439

wouldn't say it it's a career killer

4104

02:24:47,830 --> 02:24:46,160

you cannot discuss the e.t theory any

4105

02:24:49,190 --> 02:24:47,840

longer but the chairman of their

4106

02:24:51,990 --> 02:24:49,200

department

4107

02:24:53,990 --> 02:24:52,000

was an advocate to the day he died

4108

02:24:56,389 --> 02:24:54,000

now the one that supposedly put it to

4109

02:24:57,990 --> 02:24:56,399

bed was a study by this guy kak zorowski

4110

02:24:59,910 --> 02:24:58,000

who didn't work for international paper

4111

02:25:01,030 --> 02:24:59,920

for many years i've had some exchanges

4112

02:25:04,230 --> 02:25:01,040

with him

4113

02:25:06,389 --> 02:25:04,240

he's still around he took a fan

4114

02:25:07,510 --> 02:25:06,399

and blew

4115

02:25:09,110 --> 02:25:07,520

some

4116

02:25:12,230 --> 02:25:09,120

water pooled

4117

02:25:15,110 --> 02:25:12,240

in some sand and blew a fan on it and it

4118

02:25:18,309 --> 02:25:15,120

made a roughly bay like shape

4119

02:25:21,990 --> 02:25:19,910

okay yep

4120

02:25:23,830 --> 02:25:22,000

and at that time nasa was not interested

4121

02:25:25,590 --> 02:25:23,840

and i can get in the woo-woo not woo-woo

4122

02:25:27,429 --> 02:25:25,600

and i mean to be conspiratorial but

4123

02:25:30,710 --> 02:25:27,439

there's something to it that in the 70s

4124

02:25:33,990 --> 02:25:30,720

man we had bigger fish to fry

4125

02:25:36,230 --> 02:25:34,000

and his study was nasa-funded

4126  
02:25:38,389 --> 02:25:36,240  
i always thought was interesting

4127  
02:25:41,270 --> 02:25:38,399  
and it just was not in the national

4128  
02:25:43,750 --> 02:25:41,280  
security interest of the us to be

4129  
02:25:45,670 --> 02:25:43,760  
doing deep studies on things that didn't

4130  
02:25:47,429 --> 02:25:45,680  
involve russians launching missiles at

4131  
02:25:48,630 --> 02:25:47,439  
us that made us all dead you know what i

4132  
02:25:51,030 --> 02:25:48,640  
mean

4133  
02:25:53,990 --> 02:25:51,040  
and i'm not saying that's deliberate and

4134  
02:25:56,389 --> 02:25:54,000  
calculated but just the theme of nasa

4135  
02:25:58,230 --> 02:25:56,399  
and all that was to suppress this stuff

4136  
02:26:00,309 --> 02:25:58,240  
and that has haunted all of this

4137  
02:26:03,270 --> 02:26:00,319  
research including just impact frequency

4138  
02:26:04,710 --> 02:26:03,280

research for years because nasa

4139

02:26:06,389 --> 02:26:04,720

it is the reflection of climate

4140

02:26:09,750 --> 02:26:06,399

scientists when you're a nasa impact

4141

02:26:12,230 --> 02:26:09,760

frequency scientist you are being paid

4142

02:26:14,150 --> 02:26:12,240

and your theme and your meme is to go

4143

02:26:15,590 --> 02:26:14,160

out and say one this is very interesting

4144

02:26:17,750 --> 02:26:15,600

i need more money we need to study it

4145

02:26:20,230 --> 02:26:17,760

it's somewhat dangerous over huge long

4146

02:26:21,990 --> 02:26:20,240

periods of time it's an awkward position

4147

02:26:23,510 --> 02:26:22,000

because they have to both say i need

4148

02:26:25,830 --> 02:26:23,520

enough money to study it but it's not a

4149

02:26:27,190 --> 02:26:25,840

problem don't worry about it

4150

02:26:28,630 --> 02:26:27,200

which is the position of nasa now

4151  
02:26:30,790 --> 02:26:28,640  
there's a whole other group i'm getting

4152  
02:26:32,469 --> 02:26:30,800  
into the impact frequency but i don't

4153  
02:26:34,790 --> 02:26:32,479  
have time to do but

4154  
02:26:37,429 --> 02:26:34,800  
you know a great little uh uh

4155  
02:26:39,030 --> 02:26:37,439  
uh enlightened uh group eaton parkhurst

4156  
02:26:41,270 --> 02:26:39,040  
published one in 77 i should have had

4157  
02:26:42,389 --> 02:26:41,280  
that 78 or so where they brought it back

4158  
02:26:44,230 --> 02:26:42,399  
a little bit

4159  
02:26:45,990 --> 02:26:44,240  
and uh bangs around you know with

4160  
02:26:47,830 --> 02:26:46,000  
different researchers you have to

4161  
02:26:50,309 --> 02:26:47,840  
explain and this i'm not gonna bore

4162  
02:26:53,830 --> 02:26:50,319  
people with reading all these but

4163  
02:26:56,870 --> 02:26:53,840

you have to explain each of these weird

4164

02:26:59,830 --> 02:26:56,880

things before you can

4165

02:27:01,190 --> 02:26:59,840

say that you got it and nobody has yet

4166

02:27:02,150 --> 02:27:01,200

and again we don't have time to go

4167

02:27:03,270 --> 02:27:02,160

through them

4168

02:27:06,710 --> 02:27:03,280

but

4169

02:27:08,630 --> 02:27:06,720

you know each of these features of bays

4170

02:27:10,710 --> 02:27:08,640

some can be explained with one theory

4171

02:27:12,309 --> 02:27:10,720

others can be explained with the other

4172

02:27:14,070 --> 02:27:12,319

but to date

4173

02:27:16,150 --> 02:27:14,080

i would say zamora who we'll get to in a

4174

02:27:19,670 --> 02:27:16,160

minute it's kind of got it but it's hard

4175

02:27:21,590 --> 02:27:19,680

to explain them all so this is a true

4176  
02:27:25,270 --> 02:27:21,600  
and even though even the terrestrial

4177  
02:27:27,670 --> 02:27:25,280  
guys will say i don't know exactly

4178  
02:27:29,030 --> 02:27:27,680  
i can't explain everything

4179  
02:27:30,790 --> 02:27:29,040  
i don't think they were from space i

4180  
02:27:32,469 --> 02:27:30,800  
think you're crazy as hell but they are

4181  
02:27:33,830 --> 02:27:32,479  
a mystery and we can't explain it all

4182  
02:27:35,349 --> 02:27:33,840  
all of them won't say that so it's a

4183  
02:27:36,870 --> 02:27:35,359  
great subject you should see it more on

4184  
02:27:38,630 --> 02:27:36,880  
science tv

4185  
02:27:41,910 --> 02:27:38,640  
you know i don't know why it doesn't

4186  
02:27:44,550 --> 02:27:41,920  
have a bigger you know uh uh uh

4187  
02:27:46,710 --> 02:27:44,560  
a bigger presence in the in the the mind

4188  
02:27:49,590 --> 02:27:46,720

of america because they're everywhere

4189

02:27:51,910 --> 02:27:49,600

okay here's just a list of the

4190

02:27:53,349 --> 02:27:51,920

various theories going back to first guy

4191

02:27:54,790 --> 02:27:53,359

that ever noted them just said they were

4192

02:27:57,110 --> 02:27:54,800

springs

4193

02:27:58,790 --> 02:27:57,120

in 1848 then sam vardan's drowned guys

4194

02:28:00,550 --> 02:27:58,800

depression stand by giant rose craters

4195

02:28:01,910 --> 02:28:00,560

from a meteor swarm first time that came

4196

02:28:03,110 --> 02:28:01,920

up 33

4197

02:28:04,710 --> 02:28:03,120

then it was back and forth back and

4198

02:28:06,710 --> 02:28:04,720

forth back and forth you know

4199

02:28:10,150 --> 02:28:06,720

all sorts of great stuff including weird

4200

02:28:12,710 --> 02:28:10,160

stuff like giant fish wagging their

4201  
02:28:14,950 --> 02:28:12,720  
tails in unison and creating these

4202  
02:28:15,750 --> 02:28:14,960  
things that's an actual paper

4203  
02:28:18,230 --> 02:28:15,760  
you know

4204  
02:28:21,190 --> 02:28:18,240  
fish nests made by giant schools of fish

4205  
02:28:23,190 --> 02:28:21,200  
when this was obviously

4206  
02:28:24,070 --> 02:28:23,200  
post-dated

4207  
02:28:26,389 --> 02:28:24,080  
the

4208  
02:28:27,990 --> 02:28:26,399  
marine nature of our coastal plain which

4209  
02:28:29,910 --> 02:28:28,000  
you have to go way

4210  
02:28:31,910 --> 02:28:29,920  
way back to find i wish you could see my

4211  
02:28:33,429 --> 02:28:31,920  
fit my the look on my face right now and

4212  
02:28:35,670 --> 02:28:33,439  
just you know

4213  
02:28:37,670 --> 02:28:35,680

the silliness of that

4214

02:28:40,150 --> 02:28:37,680

yeah that's a grinder

4215

02:28:41,990 --> 02:28:40,160

it's a groaner okay so you've got a long

4216

02:28:44,710 --> 02:28:42,000

history of various explanations the

4217

02:28:47,349 --> 02:28:44,720

prevailing theory is that you got wind

4218

02:28:48,710 --> 02:28:47,359

you know uh going over a pool of water

4219

02:28:51,270 --> 02:28:48,720

out there and we need to see some more

4220

02:28:53,429 --> 02:28:51,280

pictures of them the bay dates very

4221

02:28:54,469 --> 02:28:53,439

inconclusive in my humble opinion that's

4222

02:28:56,070 --> 02:28:54,479

what they're going on now the

4223

02:28:58,230 --> 02:28:56,080

terrestrial guys today say they're

4224

02:29:00,630 --> 02:28:58,240

generations of bay formation they were

4225

02:29:02,150 --> 02:29:00,640

tens of thousands of years apart just

4226  
02:29:03,670 --> 02:29:02,160  
hard to believe given the thing that

4227  
02:29:05,910 --> 02:29:03,680  
every one of them you should be able to

4228  
02:29:07,750 --> 02:29:05,920  
say boy here are some old ones

4229  
02:29:10,070 --> 02:29:07,760  
here are some middle ones

4230  
02:29:11,750 --> 02:29:10,080  
and here are some brand new ones

4231  
02:29:13,110 --> 02:29:11,760  
and the old ones are hard to see blah

4232  
02:29:14,710 --> 02:29:13,120  
blah blah but it doesn't work like that

4233  
02:29:17,349 --> 02:29:14,720  
they all look pretty much the same now

4234  
02:29:19,830 --> 02:29:17,359  
they might be plowed under and harder to

4235  
02:29:21,910 --> 02:29:19,840  
detect but they're not generations of

4236  
02:29:23,590 --> 02:29:21,920  
them like they claim at least to my eye

4237  
02:29:25,510 --> 02:29:23,600  
and a lot of the debates a lot of the

4238  
02:29:27,110 --> 02:29:25,520

dates do support 12 9 but you get in the

4239

02:29:28,790 --> 02:29:27,120

whole thing when they test them that

4240

02:29:31,030 --> 02:29:28,800

things were mixed up if there was a

4241

02:29:33,830 --> 02:29:31,040

cataclysm you would have had much older

4242

02:29:36,469 --> 02:29:33,840

material kicked up right

4243

02:29:38,070 --> 02:29:36,479

so you get a mishmash of stuff

4244

02:29:39,510 --> 02:29:38,080

the key thing about the bays is that

4245

02:29:46,550 --> 02:29:39,520

they

4246

02:29:48,469 --> 02:29:46,560

and we'll see what that means in a

4247

02:29:49,910 --> 02:29:48,479

minute there are other notable features

4248

02:29:53,110 --> 02:29:49,920

of bays that you find them on top of

4249

02:29:55,110 --> 02:29:53,120

each other that uh they're on terraces

4250

02:29:56,550 --> 02:29:55,120

that the terraces being you know ground

4251  
02:29:58,070 --> 02:29:56,560  
elevation levels there's several

4252  
02:29:59,910 --> 02:29:58,080  
terraces that make up our coastal plain

4253  
02:30:01,750 --> 02:29:59,920  
it's flat as a board

4254  
02:30:03,349 --> 02:30:01,760  
um and that each of those is different

4255  
02:30:04,710 --> 02:30:03,359  
ages and you find the bays on top saw

4256  
02:30:07,030 --> 02:30:04,720  
all of them and something about four

4257  
02:30:08,710 --> 02:30:07,040  
kilometers across holy [\h\_\_\h]

4258  
02:30:10,550 --> 02:30:08,720  
oh the past

4259  
02:30:12,070 --> 02:30:10,560  
now they're city they're not cities

4260  
02:30:13,510 --> 02:30:12,080  
they're cities that are partially

4261  
02:30:15,270 --> 02:30:13,520  
covered by them but they're certainly

4262  
02:30:18,150 --> 02:30:15,280  
towns smaller towns north carolina

4263  
02:30:20,070 --> 02:30:18,160

they're entirely within them

4264

02:30:22,230 --> 02:30:20,080

yeah

4265

02:30:24,150 --> 02:30:22,240

that's from maryland to georgia they all

4266

02:30:26,309 --> 02:30:24,160

align with the great lakes that's an

4267

02:30:28,230 --> 02:30:26,319

older depiction there i'll show you some

4268

02:30:31,670 --> 02:30:28,240

better stuff in a minute but notice

4269

02:30:33,510 --> 02:30:31,680

the farther north you go the more

4270

02:30:35,990 --> 02:30:33,520

westerly they point

4271

02:30:37,750 --> 02:30:36,000

the farther south you go the more

4272

02:30:39,670 --> 02:30:37,760

northerly they point

4273

02:30:42,389 --> 02:30:39,680

they don't all point the same direction

4274

02:30:43,429 --> 02:30:42,399

but they point to the same spots

4275

02:30:44,630 --> 02:30:43,439

so essentially what you're saying is

4276

02:30:47,030 --> 02:30:44,640

it's a possibility that it could have

4277

02:30:48,790 --> 02:30:47,040

been actually actually two impact sites

4278

02:30:50,870 --> 02:30:48,800

or multiple impact sites

4279

02:30:53,990 --> 02:30:50,880

yeah that what the what the bays are

4280

02:30:55,429 --> 02:30:54,000

secondary in my opinion secondary ejecta

4281

02:30:56,630 --> 02:30:55,439

and actually i'm so open-minded to the

4282

02:30:58,550 --> 02:30:56,640

terrestrial theory i'm not completely

4283

02:31:00,469 --> 02:30:58,560

convinced i'm not condensed to anything

4284

02:31:01,990 --> 02:31:00,479

completely and i'm relatively

4285

02:31:03,830 --> 02:31:02,000

open-minded we may be dead wrong about

4286

02:31:05,750 --> 02:31:03,840

stuff but they hadn't explained it all

4287

02:31:07,270 --> 02:31:05,760

and they hide from it and they won't

4288

02:31:09,030 --> 02:31:07,280

discuss it

4289

02:31:11,349 --> 02:31:09,040

that the you know they want it try to

4290

02:31:13,349 --> 02:31:11,359

use the they won't accept the criticisms

4291

02:31:14,950 --> 02:31:13,359

that we have particularly i'll give you

4292

02:31:17,429 --> 02:31:14,960

one good example my favorite example

4293

02:31:20,389 --> 02:31:17,439

should have done a slide on it

4294

02:31:22,150 --> 02:31:20,399

but when we went out and dug these cores

4295

02:31:24,469 --> 02:31:22,160

in the bays and sent all the stuff out

4296

02:31:26,469 --> 02:31:24,479

to university of california right and

4297

02:31:28,230 --> 02:31:26,479

kenneth's lab went through the sand

4298

02:31:30,309 --> 02:31:28,240

you're sending out sand just bags of

4299

02:31:32,309 --> 02:31:30,319

sand bags of sand this one's from this

4300

02:31:33,910 --> 02:31:32,319

level this one's another you know 10

4301  
02:31:36,309 --> 02:31:33,920  
centimeters down another 10 centimeters

4302  
02:31:38,630 --> 02:31:36,319  
down they go through it

4303  
02:31:40,070 --> 02:31:38,640  
they did not find in a couple of days we

4304  
02:31:42,469 --> 02:31:40,080  
did and you could find plenty more

4305  
02:31:46,630 --> 02:31:42,479  
examples in fact thousands of them

4306  
02:31:48,870 --> 02:31:46,640  
one single freshwater diatom

4307  
02:31:51,030 --> 02:31:48,880  
that if there was a lake that was there

4308  
02:31:52,630 --> 02:31:51,040  
that persisted long enough to create the

4309  
02:31:55,110 --> 02:31:52,640  
feature itself

4310  
02:31:56,389 --> 02:31:55,120  
there should be

4311  
02:31:58,389 --> 02:31:56,399  
fossilized

4312  
02:32:02,550 --> 02:31:58,399  
if not fast laws dried out desiccated

4313  
02:32:03,750 --> 02:32:02,560

whatever remnants of lake biota right

4314

02:32:04,950 --> 02:32:03,760

you would be able to tell there was a

4315

02:32:06,389 --> 02:32:04,960

lake there yeah first of all there

4316

02:32:08,230 --> 02:32:06,399

should be pete you know it should be

4317

02:32:11,349 --> 02:32:08,240

black it should be organic but this is

4318

02:32:13,510 --> 02:32:11,359

just sand very important to understand

4319

02:32:14,710 --> 02:32:13,520

and they cannot answer that

4320

02:32:16,309 --> 02:32:14,720

that's one of the things that they don't

4321

02:32:17,990 --> 02:32:16,319

want you standing up at geological

4322

02:32:19,750 --> 02:32:18,000

society of america holding your hand up

4323

02:32:21,830 --> 02:32:19,760

and going well what about the bays that

4324

02:32:23,590 --> 02:32:21,840

were never lakes we've proved that you

4325

02:32:26,630 --> 02:32:23,600

know i don't want to hear that

4326

02:32:28,309 --> 02:32:26,640

okay real quick that's from nebraska

4327

02:32:32,070 --> 02:32:28,319

and that's something that we brought

4328

02:32:33,750 --> 02:32:32,080

along by use of lidar that was 100

4329

02:32:37,349 --> 02:32:33,760

i forget who found it first we have to

4330

02:32:39,349 --> 02:32:37,359

look you know uh alan west pointed out

4331

02:32:41,110 --> 02:32:39,359

and a guy zanner who doesn't believe

4332

02:32:44,150 --> 02:32:41,120

they're from space pointed out out in

4333

02:32:46,309 --> 02:32:44,160

nebraska but then michael davies

4334

02:32:47,830 --> 02:32:46,319

great fellow he's very key it has a

4335

02:32:49,190 --> 02:32:47,840

website that i'll have a link to here in

4336

02:32:51,750 --> 02:32:49,200

a minute

4337

02:32:54,309 --> 02:32:51,760

found on lidar which is uh light

4338

02:32:55,670 --> 02:32:54,319

interpolated uh blah blah laser

4339

02:32:58,150 --> 02:32:55,680

level

4340

02:32:59,830 --> 02:32:58,160

laser elevation detection right it's

4341

02:33:02,230 --> 02:32:59,840

very fine-tuned

4342

02:33:04,230 --> 02:33:02,240

and can show you anything it's a

4343

02:33:06,389 --> 02:33:04,240

elevation change we use it all the time

4344

02:33:08,710 --> 02:33:06,399

in our work coincidentally but when you

4345

02:33:10,469 --> 02:33:08,720

look at lidar you find the bays out

4346

02:33:11,910 --> 02:33:10,479

there you can also see them you know

4347

02:33:16,790 --> 02:33:11,920

through photography and we'll look us up

4348

02:33:20,870 --> 02:33:18,630

hey a gif kevin if you're listening to

4349

02:33:23,510 --> 02:33:20,880

this go find me at bay because i've

4350

02:33:25,590 --> 02:33:23,520

got a a long time listener out in

4351

02:33:27,990 --> 02:33:25,600

nebraska he's actually called kevin from

4352

02:33:30,309 --> 02:33:28,000

nebraska they call them the rainwater

4353

02:33:31,990 --> 02:33:30,319

basins out there

4354

02:33:33,429 --> 02:33:32,000

yeah they didn't call them carolina bays

4355

02:33:36,389 --> 02:33:33,439

they had their own the brat in fact they

4356

02:33:37,990 --> 02:33:36,399

called the nebraska rain water basins

4357

02:33:39,830 --> 02:33:38,000

and no one had ever put that together to

4358

02:33:42,550 --> 02:33:39,840

a modern time so if you take all those

4359

02:33:44,070 --> 02:33:42,560

older studies and all the back and forth

4360

02:33:46,710 --> 02:33:44,080

and even the people who said hey they

4361

02:33:48,550 --> 02:33:46,720

all point there was a whole nother

4362

02:33:51,030 --> 02:33:48,560

population of them out west that was

4363

02:33:53,349 --> 02:33:51,040

pointing the same damn direction

4364

02:33:55,590 --> 02:33:53,359

there you go

4365

02:33:57,190 --> 02:33:55,600

there they are at the top in the east

4366

02:33:59,190 --> 02:33:57,200

those are what north carolina so they

4367

02:34:00,389 --> 02:33:59,200

got about the north carolina point which

4368

02:34:02,870 --> 02:34:00,399

is you know

4369

02:34:03,990 --> 02:34:02,880

i know whatever that is 180 degrees

4370

02:34:05,590 --> 02:34:04,000

um

4371

02:34:07,830 --> 02:34:05,600

what would that be i don't know 300

4372

02:34:10,389 --> 02:34:07,840

degrees um

4373

02:34:11,750 --> 02:34:10,399

and then out in nebraska where they're

4374

02:34:14,389 --> 02:34:11,760

pointing back the other direction in

4375

02:34:18,550 --> 02:34:16,469

i mean those two phenomena

4376

02:34:21,270 --> 02:34:18,560

have to be related and if they're

4377

02:34:22,870 --> 02:34:21,280

related that was a hell of a wind

4378

02:34:24,870 --> 02:34:22,880

that happened to

4379

02:34:27,270 --> 02:34:24,880

so carefully and remember these guys say

4380

02:34:29,270 --> 02:34:27,280

they're separated the bay formation

4381

02:34:31,270 --> 02:34:29,280

episodes by thousands of years tens of

4382

02:34:33,190 --> 02:34:31,280

thousands of years into four or five

4383

02:34:34,950 --> 02:34:33,200

episodes right

4384

02:34:36,309 --> 02:34:34,960

why would that wind

4385

02:34:37,830 --> 02:34:36,319

reoccur

4386

02:34:40,389 --> 02:34:37,840

and manage

4387

02:34:41,510 --> 02:34:40,399

to align itself in such a manner to

4388

02:34:44,389 --> 02:34:41,520

create

4389

02:34:46,710 --> 02:34:44,399

other bays thousands of years later

4390

02:34:47,990 --> 02:34:46,720

that continue to orient themselves the

4391

02:34:49,270 --> 02:34:48,000

same way

4392

02:34:50,950 --> 02:34:49,280

well i know that answer but i'm going to

4393

02:34:53,750 --> 02:34:50,960

let you answer that question because

4394

02:34:55,510 --> 02:34:53,760

that's [h\_\_\h] yeah it's just [h\_\_\h]

4395

02:34:57,910 --> 02:34:55,520

no way there's another now

4396

02:35:00,950 --> 02:34:57,920

the davies crowd is is pretty keen on

4397

02:35:03,190 --> 02:35:00,960

saginaw bay go look at the thumb there

4398

02:35:05,750 --> 02:35:03,200

of michigan

4399

02:35:07,429 --> 02:35:05,760

okay i can't go through the geology

4400

02:35:10,230 --> 02:35:07,439

certainly disputed no one's properly

4401

02:35:12,150 --> 02:35:10,240

studied it but if you follow

4402

02:35:14,309 --> 02:35:12,160

the art back and actually taken the

4403

02:35:16,630 --> 02:35:14,319

corrales effect coriolis effect i think

4404

02:35:18,469 --> 02:35:16,640

you call it where you gotta take in the

4405

02:35:20,230 --> 02:35:18,479

account that during the hour that stuff

4406

02:35:21,030 --> 02:35:20,240

was up you know

4407

02:35:22,630 --> 02:35:21,040

uh

4408

02:35:24,309 --> 02:35:22,640

the half hour or whatever it is the

4409

02:35:26,710 --> 02:35:24,319

earth actually turned

4410

02:35:28,790 --> 02:35:26,720

it's very complicated orbital dynamics

4411

02:35:30,950 --> 02:35:28,800

that these guys have worked out that

4412

02:35:32,550 --> 02:35:30,960

traces it all back to saginaw bay which

4413

02:35:34,550 --> 02:35:32,560

is a hole

4414

02:35:36,230 --> 02:35:34,560

you know in the michigan thumb there yep

4415

02:35:37,190 --> 02:35:36,240

we've we've looked at that

4416

02:35:39,910 --> 02:35:37,200

mm-hmm

4417

02:35:41,270 --> 02:35:39,920

that's why so based on the white events

4418

02:35:43,270 --> 02:35:41,280

theorized to be the result of an impact

4419

02:35:44,630 --> 02:35:43,280

air burst over canada fire station

4420

02:35:46,230 --> 02:35:44,640

topping fine physical evidence so

4421

02:35:49,190 --> 02:35:46,240

everybody but made without the knowledge

4422

02:35:50,550 --> 02:35:49,200

of the bay event so they long theorized

4423

02:35:52,950 --> 02:35:50,560

to be um

4424

02:35:54,710 --> 02:35:52,960

over canada or thereabouts

4425

02:35:56,230 --> 02:35:54,720

and then in 99

4426  
02:35:58,150 --> 02:35:56,240  
without any knowledge of the bays these

4427  
02:36:00,870 --> 02:35:58,160  
guys say something blew up over canada

4428  
02:36:03,670 --> 02:36:00,880  
and then they those two came together

4429  
02:36:05,349 --> 02:36:03,680  
and then the orientation is uh towards

4430  
02:36:06,830 --> 02:36:05,359  
that same place that we found the yd

4431  
02:36:09,270 --> 02:36:06,840  
evidence

4432  
02:36:11,590 --> 02:36:09,280  
and that lasts

4433  
02:36:13,349 --> 02:36:11,600  
that's disputed now it used to be that

4434  
02:36:14,710 --> 02:36:13,359  
you found them also 12 9 these guys have

4435  
02:36:16,389 --> 02:36:14,720  
done a lot of other

4436  
02:36:18,309 --> 02:36:16,399  
dating now where they're finding older

4437  
02:36:19,830 --> 02:36:18,319  
dates but i would say that's mixed

4438  
02:36:20,870 --> 02:36:19,840

material

4439

02:36:23,110 --> 02:36:20,880

so

4440

02:36:25,349 --> 02:36:23,120

that's that that's me during my heaviest

4441

02:36:26,950 --> 02:36:25,359

period ever i promise

4442

02:36:30,070 --> 02:36:26,960

uh

4443

02:36:30,790 --> 02:36:30,080

out in carolina bay and we studied 15 of

4444

02:36:33,030 --> 02:36:30,800

them

4445

02:36:35,830 --> 02:36:33,040

and in each one

4446

02:36:37,429 --> 02:36:35,840

we found carbon sphericals

4447

02:36:39,270 --> 02:36:37,439

magnetic grains

4448

02:36:41,830 --> 02:36:39,280

fullerenes glass right carbon and

4449

02:36:43,830 --> 02:36:41,840

nanodiamonds holy [h\_\_h]

4450

02:36:45,750 --> 02:36:43,840

right and when you go through the room

4451  
02:36:48,710 --> 02:36:45,760  
when you get back down into the below

4452  
02:36:50,550 --> 02:36:48,720  
bay material all that stuff disappears

4453  
02:36:53,270 --> 02:36:50,560  
right

4454  
02:36:57,830 --> 02:36:53,280  
boom boom boom there's the poster i gave

4455  
02:36:59,910 --> 02:36:57,840  
at agu down in acapulco in 2007

4456  
02:37:02,309 --> 02:36:59,920  
very excited citizen scientist to get to

4457  
02:37:03,990 --> 02:37:02,319  
go to the agu world congress down there

4458  
02:37:05,030 --> 02:37:04,000  
and present a poster it was great great

4459  
02:37:05,990 --> 02:37:05,040  
fun

4460  
02:37:07,990 --> 02:37:06,000  
um

4461  
02:37:08,870 --> 02:37:08,000  
and you can see that's a bay

4462  
02:37:11,830 --> 02:37:08,880  
uh

4463  
02:37:12,950 --> 02:37:11,840

a buddy named howard bay the researchers

4464

02:37:15,510 --> 02:37:12,960

and

4465

02:37:18,150 --> 02:37:15,520

uh it's never been a lake

4466

02:37:20,389 --> 02:37:18,160

that's the key thing there is not one

4467

02:37:22,950 --> 02:37:20,399

sign that has ever been a lake

4468

02:37:25,270 --> 02:37:22,960

when you go below the bay rim

4469

02:37:27,349 --> 02:37:25,280

uh and below the bay material you find

4470

02:37:29,349 --> 02:37:27,359

nothing in the basin

4471

02:37:30,630 --> 02:37:29,359

you find no et materials

4472

02:37:32,469 --> 02:37:30,640

below that

4473

02:37:34,630 --> 02:37:32,479

michael davies and these guys are

4474

02:37:35,830 --> 02:37:34,640

absolutely critical now again i'll give

4475

02:37:38,150 --> 02:37:35,840

you their website in a moment it's

4476

02:37:39,910 --> 02:37:38,160

called centos.org

4477

02:37:41,429 --> 02:37:39,920

and if you're interested in bays and got

4478

02:37:42,710 --> 02:37:41,439

a hunger to learn more about them right

4479

02:37:44,630 --> 02:37:42,720

now after hearing some of this stuff

4480

02:37:48,150 --> 02:37:44,640

being introduced to them

4481

02:37:50,790 --> 02:37:48,160

they can feed you all day long they've

4482

02:37:52,230 --> 02:37:50,800

got more stuff in there they have done a

4483

02:37:54,070 --> 02:37:52,240

great job and as you can see they're

4484

02:37:56,790 --> 02:37:54,080

getting it in conferences they are

4485

02:37:58,469 --> 02:37:56,800

regular presenters of this material wild

4486

02:38:00,950 --> 02:37:58,479

as it is at conferences they have made

4487

02:38:03,190 --> 02:38:00,960

it back in the gsa geological society of

4488

02:38:06,630 --> 02:38:03,200

america hopefully we'll make it to agu

4489

02:38:09,030 --> 02:38:06,640

in san francisco this december

4490

02:38:10,550 --> 02:38:09,040

and they went and classified them each

4491

02:38:14,070 --> 02:38:10,560

as

4492

02:38:15,830 --> 02:38:14,080

they discovered that up north they're

4493

02:38:17,750 --> 02:38:15,840

shaped as bells

4494

02:38:19,750 --> 02:38:17,760

uh blah blah blah depending on where

4495

02:38:21,750 --> 02:38:19,760

they are they're about five or six

4496

02:38:23,670 --> 02:38:21,760

different types and i couldn't find the

4497

02:38:25,270 --> 02:38:23,680

perfect slide to show each type but

4498

02:38:27,110 --> 02:38:25,280

they've got all that on their

4499

02:38:30,309 --> 02:38:27,120

website

4500

02:38:31,510 --> 02:38:30,319

and if you take the one type called

4501

02:38:33,110 --> 02:38:31,520

the

4502

02:38:35,910 --> 02:38:33,120

bell

4503

02:38:36,710 --> 02:38:35,920

shape that you find up in uh delaware

4504

02:38:39,910 --> 02:38:36,720

and

4505

02:38:43,190 --> 02:38:39,920

all the dots are right

4506

02:38:46,389 --> 02:38:43,200

and you go track back where it came from

4507

02:38:49,110 --> 02:38:46,399

based on the ballistic trajectory target

4508

02:38:53,910 --> 02:38:49,120

analysis right

4509

02:38:58,230 --> 02:38:56,309

and i had to call i had seen this a few

4510

02:38:59,830 --> 02:38:58,240

months ago and

4511

02:39:01,750 --> 02:38:59,840

it's been out there a while but it just

4512

02:39:03,510 --> 02:39:01,760

blew my mind too much i had to call tim

4513

02:39:06,150 --> 02:39:03,520

harris who's worked all this stuff out

4514

02:39:07,990 --> 02:39:06,160

he's a polymath up in brooklyn you know

4515

02:39:11,910 --> 02:39:08,000

it's a who's a math

4516

02:39:14,230 --> 02:39:11,920

genius okay and ballistics guy

4517

02:39:17,110 --> 02:39:14,240

and he is absolutely obsessed with it

4518

02:39:19,510 --> 02:39:17,120

and has you know him and davis david

4519

02:39:21,670 --> 02:39:19,520

davies have made uh big buddies

4520

02:39:23,030 --> 02:39:21,680

and they have done the math on this

4521

02:39:25,190 --> 02:39:23,040

stuff right

4522

02:39:27,110 --> 02:39:25,200

and not only do they say that it created

4523

02:39:29,349 --> 02:39:27,120

the bays but they say they created the

4524

02:39:32,309 --> 02:39:29,359

australasian tectites

4525

02:39:36,550 --> 02:39:32,319

that you find in the uh south china sea

4526

02:39:38,790 --> 02:39:36,560

in australia in uh southeast asia

4527

02:39:40,790 --> 02:39:38,800

which has long been a tremendous mystery

4528

02:39:42,870 --> 02:39:40,800

because you find these tektites which

4529

02:39:45,429 --> 02:39:42,880

are

4530

02:39:47,670 --> 02:39:45,439

terrestrial material that has gone into

4531

02:39:49,830 --> 02:39:47,680

space and this is all well accepted and

4532

02:39:51,590 --> 02:39:49,840

then landed again

4533

02:39:54,070 --> 02:39:51,600

they used to think it was from the moon

4534

02:39:56,230 --> 02:39:54,080

the impact hit the moon splattered stuff

4535

02:39:58,070 --> 02:39:56,240

here that was early 20th century trying

4536

02:39:59,429 --> 02:39:58,080

to explain these things now it's well

4537

02:40:00,469 --> 02:39:59,439

accepted you can see the bay types

4538

02:40:01,910 --> 02:40:00,479

actually in the middle of that bell

4539

02:40:03,670 --> 02:40:01,920

shore oval

4540

02:40:06,389 --> 02:40:03,680

carolina what not

4541

02:40:08,150 --> 02:40:06,399

but they believe that at the zipper of

4542

02:40:09,910 --> 02:40:08,160

right where it hit

4543

02:40:11,590 --> 02:40:09,920

that when you release the pressure of

4544

02:40:13,110 --> 02:40:11,600

the ice sheet and the ice sheet was

4545

02:40:16,070 --> 02:40:13,120

blown apart

4546

02:40:18,309 --> 02:40:16,080

that the underlying material exploded

4547

02:40:21,030 --> 02:40:18,319

further than the sand did that the bays

4548

02:40:24,309 --> 02:40:21,040

are actually sand

4549

02:40:26,389 --> 02:40:24,319

ejected from the impact but the most

4550

02:40:28,070 --> 02:40:26,399

intense point of impact actually

4551

02:40:31,110 --> 02:40:28,080

launched that stuff

4552

02:40:34,550 --> 02:40:31,120

into orbit where it landed

4553

02:40:36,389 --> 02:40:34,560

on the other side of the planet

4554

02:40:37,990 --> 02:40:36,399

and look at the detail of this stuff i

4555

02:40:39,990 --> 02:40:38,000

mean you can't put that in a damn

4556

02:40:41,910 --> 02:40:40,000

powerpoint slide right

4557

02:40:46,389 --> 02:40:41,920

i mean just too much of it so go to

4558

02:40:48,150 --> 02:40:46,399

centos.org all the bays all the time

4559

02:40:49,990 --> 02:40:48,160

and that's agu fall meetings so they're

4560

02:40:53,270 --> 02:40:50,000

getting it you know they are getting it

4561

02:40:55,270 --> 02:40:53,280

in at least posters

4562

02:40:56,870 --> 02:40:55,280

which should be at some point you know

4563

02:40:58,469 --> 02:40:56,880

people got to go and refute them and

4564

02:41:00,389 --> 02:40:58,479

they they they aren't being adequately

4565

02:41:02,550 --> 02:41:00,399

refuted they're being ignored but at

4566

02:41:04,550 --> 02:41:02,560

least they're getting presented

4567

02:41:06,070 --> 02:41:04,560

and that's wild stuff man launched it

4568

02:41:08,630 --> 02:41:06,080

all into space and it comes down in

4569

02:41:10,630 --> 02:41:08,640

those weird weird shapes that

4570

02:41:12,469 --> 02:41:10,640

show that it was in zero gravity at some

4571

02:41:14,550 --> 02:41:12,479

point

4572

02:41:16,389 --> 02:41:14,560

okay this is the most recent guy and i

4573

02:41:17,910 --> 02:41:16,399

think he came up with something new he

4574

02:41:19,590 --> 02:41:17,920

added something to this debate that goes

4575

02:41:22,950 --> 02:41:19,600

back to 33

4576

02:41:25,030 --> 02:41:22,960

and that's my new buddy antonio zamora

4577

02:41:26,710 --> 02:41:25,040

and he's another math guy these guys are

4578

02:41:28,710 --> 02:41:26,720

all math guys because they look at them

4579

02:41:32,550 --> 02:41:28,720

and say the symmetry is so

4580

02:41:33,750 --> 02:41:32,560

unusual and so uniform and so widespread

4581

02:41:36,389 --> 02:41:33,760

that there has to be kind of a

4582

02:41:39,349 --> 02:41:36,399

mathematical aspect to this that if you

4583

02:41:40,950 --> 02:41:39,359

get enough data you can figure it out so

4584

02:41:43,670 --> 02:41:40,960

he accepted most of the davies

4585

02:41:46,550 --> 02:41:43,680

conclusions but he added one

4586

02:41:48,550 --> 02:41:46,560

he believed well he added an important

4587

02:41:51,110 --> 02:41:48,560

new twist

4588

02:41:52,230 --> 02:41:51,120

he said that the impact and you can read

4589

02:41:53,349 --> 02:41:52,240

his paper

4590

02:41:55,429 --> 02:41:53,359

damn i don't think i got a link to it

4591

02:41:57,590 --> 02:41:55,439

there if i do it at the end and this

4592

02:41:59,910 --> 02:41:57,600

paper was just a couple of months ago no

4593

02:42:02,070 --> 02:41:59,920

it just crickets no one has answered it

4594

02:42:04,550 --> 02:42:02,080

but he got it published in geomorphology

4595

02:42:07,030 --> 02:42:04,560

which is the perfect journal for it the

4596

02:42:07,990 --> 02:42:07,040

landform origins

4597

02:42:09,349 --> 02:42:08,000

journal

4598

02:42:11,429 --> 02:42:09,359

and he says

4599

02:42:12,710 --> 02:42:11,439

that it was the chunks of ice which

4600

02:42:14,230 --> 02:42:12,720

people have said for years maybe it's

4601  
02:42:17,110 --> 02:42:14,240  
chunks of ice that come down but what he

4602  
02:42:19,110 --> 02:42:17,120  
added was that the earthquake and that's

4603  
02:42:20,950 --> 02:42:19,120  
putting it mildly

4604  
02:42:22,070 --> 02:42:20,960  
the big shake would have gotten here

4605  
02:42:24,270 --> 02:42:22,080  
first

4606  
02:42:27,349 --> 02:42:24,280  
that our coastal plain which is

4607  
02:42:29,910 --> 02:42:27,359  
unconsolidated sediment you know sand

4608  
02:42:31,190 --> 02:42:29,920  
right would have in with a high water

4609  
02:42:32,950 --> 02:42:31,200  
table that's why i do wetlands

4610  
02:42:35,030 --> 02:42:32,960  
mitigation down there because it's all

4611  
02:42:37,510 --> 02:42:35,040  
wetlands 75 percent of the coastal plain

4612  
02:42:39,590 --> 02:42:37,520  
is wetlands

4613  
02:42:41,910 --> 02:42:39,600

but not sloppy wet you know it's within

4614

02:42:45,190 --> 02:42:41,920

a foot of the surface most of it

4615

02:42:47,110 --> 02:42:45,200

that that would have liquefied that sand

4616

02:42:48,389 --> 02:42:47,120

just as it does in earthquakes and you

4617

02:42:49,910 --> 02:42:48,399

can see what happened to that pickup

4618

02:42:51,990 --> 02:42:49,920

truck here we've seen liquefied you

4619

02:42:53,590 --> 02:42:52,000

could walk up to that pickup and stomp

4620

02:42:56,710 --> 02:42:53,600

your foot on the ground and it's solid

4621

02:43:00,309 --> 02:42:56,720

as a rock right or solid sand

4622

02:43:02,790 --> 02:43:00,319

but if you shake it properly it it it

4623

02:43:04,630 --> 02:43:02,800

turns into essentially a liquid so you

4624

02:43:07,429 --> 02:43:04,640

see what's going on

4625

02:43:08,790 --> 02:43:07,439

that the ice the gigantic hypersonic ice

4626

02:43:11,110 --> 02:43:08,800

boulders launched from the shock

4627

02:43:12,950 --> 02:43:11,120

liquefied were launched into the shock

4628

02:43:16,150 --> 02:43:12,960

liquefied soil

4629

02:43:18,150 --> 02:43:16,160

and that they slammed into that soil

4630

02:43:19,349 --> 02:43:18,160

and that the bays

4631

02:43:20,630 --> 02:43:19,359

it's the same thing that happens when

4632

02:43:22,790 --> 02:43:20,640

you shoot a

4633

02:43:24,150 --> 02:43:22,800

you know take a slingshot i guess he

4634

02:43:26,150 --> 02:43:24,160

used i forget what he used he doesn't

4635

02:43:28,309 --> 02:43:26,160

say in the paperwork but he took a

4636

02:43:30,469 --> 02:43:28,319

projectile

4637

02:43:32,630 --> 02:43:30,479

and shot it into

4638

02:43:34,150 --> 02:43:32,640

a slurry of sand

4639

02:43:36,790 --> 02:43:34,160

and what he found out was that it

4640

02:43:38,790 --> 02:43:36,800

creates a cavity and then that cavity

4641

02:43:41,030 --> 02:43:38,800

viscous relaxation

4642

02:43:42,870 --> 02:43:41,040

brings all the sand back up and you end

4643

02:43:44,230 --> 02:43:42,880

up with a duple

4644

02:43:45,750 --> 02:43:44,240

well something interesting that that

4645

02:43:47,590 --> 02:43:45,760

mark is saying is that he's watched them

4646

02:43:49,349 --> 02:43:47,600

dig deep tunnel systems under newly

4647

02:43:52,710 --> 02:43:49,359

constructed road roadways specifically

4648

02:43:56,309 --> 02:43:54,630

so that that is yeah and he he's out in

4649

02:43:57,910 --> 02:43:56,319

that area so like that that's that's a

4650

02:44:00,469 --> 02:43:57,920

possibility oh it's wet

4651  
02:44:02,150 --> 02:44:00,479  
yeah well it's wet water table you know

4652  
02:44:03,830 --> 02:44:02,160  
you call it the coastal plain as soon as

4653  
02:44:05,510 --> 02:44:03,840  
you hit the fall line as you call it

4654  
02:44:08,150 --> 02:44:05,520  
which in a distinct line but as soon as

4655  
02:44:09,349 --> 02:44:08,160  
you hit that it all goes flat down here

4656  
02:44:12,309 --> 02:44:09,359  
you know

4657  
02:44:13,750 --> 02:44:12,319  
and that that is all wet sandy soil and

4658  
02:44:15,190 --> 02:44:13,760  
if you shake it hard and this happened

4659  
02:44:17,670 --> 02:44:15,200  
in the charleston earthquake back in the

4660  
02:44:20,550 --> 02:44:17,680  
1800s they had liquefaction of the

4661  
02:44:22,230 --> 02:44:20,560  
soils and this earthquake was

4662  
02:44:23,510 --> 02:44:22,240  
orders of magnitude worse than anything

4663  
02:44:26,309 --> 02:44:23,520

we've ever seen

4664

02:44:27,750 --> 02:44:26,319

and when that ice landed

4665

02:44:30,070 --> 02:44:27,760

it went in and what would happen to the

4666

02:44:32,070 --> 02:44:30,080

ice it would melt

4667

02:44:35,269 --> 02:44:32,080

it's all gone so you just end up with

4668

02:44:38,710 --> 02:44:37,110

a buddy sent me this the other day the

4669

02:44:40,230 --> 02:44:38,720

most merciful thing in the world i think

4670

02:44:42,469 --> 02:44:40,240

is the inability of the human mind to

4671

02:44:44,230 --> 02:44:42,479

correlate all its contents

4672

02:44:45,990 --> 02:44:44,240

we live on a placid island of ignorance

4673

02:44:47,349 --> 02:44:46,000

in the midst of black seas of infinity

4674

02:44:49,030 --> 02:44:47,359

and it was not meant that we should

4675

02:44:50,950 --> 02:44:49,040

voyage for

4676

02:44:52,630 --> 02:44:50,960

the scientists each straining that the

4677

02:44:55,670 --> 02:44:52,640

sciences eat strain in its own direction

4678

02:44:57,670 --> 02:44:55,680

of hitherto harmed us little but someday

4679

02:44:58,870 --> 02:44:57,680

the piecing together disassociated

4680

02:45:00,710 --> 02:44:58,880

knowledge which all this is you know

4681

02:45:03,190 --> 02:45:00,720

it's all multidisciplinary

4682

02:45:05,269 --> 02:45:03,200

we'll open up such a terrifying vistas

4683

02:45:07,750 --> 02:45:05,279

of reality in our frightful position

4684

02:45:11,110 --> 02:45:07,760

therein that we shall either go mad from

4685

02:45:12,950 --> 02:45:11,120

the revelation or free from the light

4686

02:45:14,309 --> 02:45:12,960

that's what's going on that eventually

4687

02:45:16,790 --> 02:45:14,319

this stuff can all get pieced together

4688

02:45:17,830 --> 02:45:16,800

and people are going to go holy

4689

02:45:19,190 --> 02:45:17,840

[h\_\_\h]

4690

02:45:20,550 --> 02:45:19,200

i've been saying that for the last hour

4691

02:45:22,309 --> 02:45:20,560

and so is everyone else in chat right

4692

02:45:24,950 --> 02:45:22,319

now

4693

02:45:26,710 --> 02:45:24,960

because here's some good links oh yeah

4694

02:45:28,309 --> 02:45:26,720

yeah and i'll get you both please and

4695

02:45:29,830 --> 02:45:28,319

i'll clean them up a little and you can

4696

02:45:31,990 --> 02:45:29,840

put them on your um

4697

02:45:34,469 --> 02:45:32,000

your show page and i appreciate your

4698

02:45:35,750 --> 02:45:34,479

patience with my technical failures well

4699

02:45:37,590 --> 02:45:35,760

it's not your technical failures it's

4700

02:45:38,710 --> 02:45:37,600

microsoft's technical failures and of

4701

02:45:41,190 --> 02:45:38,720

being able to

4702

02:45:43,590 --> 02:45:41,200

program a halfway decent application

4703

02:45:46,309 --> 02:45:43,600

um if if you want to be able to jump off

4704

02:45:49,510 --> 02:45:46,319

jump on here and um yeah

4705

02:45:52,710 --> 02:45:49,520

let me go on back let me get back here

4706

02:45:55,190 --> 02:45:52,720

i'm uh i'm kind of flabbergasted um good

4707

02:45:56,870 --> 02:45:55,200

and you're hard to flabbergast

4708

02:45:58,790 --> 02:45:56,880

oh stuff like this i love [h\_\_h] like this

4709

02:46:00,950 --> 02:45:58,800

this is this is the best [h\_\_h]

4710

02:46:03,830 --> 02:46:00,960

yeah the base is good the bays needed a

4711

02:46:06,630 --> 02:46:03,840

place in alternative speculative science

4712

02:46:08,469 --> 02:46:06,640

it's worthy and you can find guys that

4713

02:46:10,389 --> 02:46:08,479

girls that know all sorts of weird stuff

4714

02:46:11,670 --> 02:46:10,399

and unexplained anomalies

4715

02:46:13,030 --> 02:46:11,680

and you say carolina bay they don't know

4716

02:46:14,790 --> 02:46:13,040

what you're talking about and if you

4717

02:46:17,030 --> 02:46:14,800

introduce them to it they're

4718

02:46:18,870 --> 02:46:17,040

they'll love it now again like this has

4719

02:46:21,429 --> 02:46:18,880

been amazing regardless of any of the

4720

02:46:22,550 --> 02:46:21,439

technical uh issues and normally i'd

4721

02:46:24,710 --> 02:46:22,560

open up the the phone lines

4722

02:46:27,269 --> 02:46:24,720

unfortunately i found out that um the

4723

02:46:28,230 --> 02:46:27,279

cord that i've been using to attach to

4724

02:46:30,230 --> 02:46:28,240

my

4725

02:46:33,190 --> 02:46:30,240

uh

4726  
02:46:34,550 --> 02:46:33,200  
to my ipad here apparently it's it like

4727  
02:46:36,790 --> 02:46:34,560  
i can get audio but i can't get

4728  
02:46:38,230 --> 02:46:36,800  
microphone to it so i for anybody who's

4729  
02:46:39,590 --> 02:46:38,240  
in chat right now if you want to just

4730  
02:46:42,469 --> 02:46:39,600  
send in your q like send it a question

4731  
02:46:43,750 --> 02:46:42,479  
just type it in i can i'll take about 10

4732  
02:46:45,910 --> 02:46:43,760  
minutes to

4733  
02:46:47,190 --> 02:46:45,920  
answer as many of those i can with with

4734  
02:46:49,990 --> 02:46:47,200  
george here before we finish up for the

4735  
02:46:52,150 --> 02:46:50,000  
night so

4736  
02:46:53,990 --> 02:46:52,160  
okay well actually jared thompson from

4737  
02:46:56,070 --> 02:46:54,000  
australia is sitting in his first one

4738  
02:46:58,710 --> 02:46:56,080

which is uh would there be an any impact

4739

02:47:00,710 --> 02:46:58,720

sites in the ocean off of the coast then

4740

02:47:03,349 --> 02:47:00,720

that's an excellent question jared and

4741

02:47:05,670 --> 02:47:03,359

i've never felt that our

4742

02:47:07,110 --> 02:47:05,680

team has adequately addressed that that

4743

02:47:09,429 --> 02:47:07,120

that's something i have said to them

4744

02:47:10,950 --> 02:47:09,439

before i'm like you know

4745

02:47:13,349 --> 02:47:10,960

maybe

4746

02:47:17,110 --> 02:47:13,359

there was an impact that cast this stuff

4747

02:47:20,790 --> 02:47:18,469

but

4748

02:47:24,230 --> 02:47:20,800

there wouldn't be enough material and

4749

02:47:26,389 --> 02:47:24,240

enough trauma to cause the global

4750

02:47:27,750 --> 02:47:26,399

cataclysm we see without seeing a big

4751

02:47:29,910 --> 02:47:27,760

crater

4752

02:47:32,309 --> 02:47:29,920

if it in the lakes etc or hudson bay or

4753

02:47:35,030 --> 02:47:32,319

whatever without getting the big crater

4754

02:47:36,870 --> 02:47:35,040

and that the big crater is in the 70 you

4755

02:47:38,950 --> 02:47:36,880

know whatever it is 75 percent of the

4756

02:47:41,429 --> 02:47:38,960

earth that's covered by water

4757

02:47:42,870 --> 02:47:41,439

there absolutely could be such a beast

4758

02:47:44,469 --> 02:47:42,880

out there and you wouldn't know it and

4759

02:47:45,910 --> 02:47:44,479

it could have contributed to this and it

4760

02:47:47,110 --> 02:47:45,920

could be in another part of the northern

4761

02:47:49,830 --> 02:47:47,120

hemisphere

4762

02:47:51,429 --> 02:47:49,840

you know south of the aleutian islands

4763

02:47:53,510 --> 02:47:51,439

and then a part of the same event and

4764

02:47:55,269 --> 02:47:53,520

we'd have absolutely no idea

4765

02:47:57,830 --> 02:47:55,279

and we're just looking at secondary

4766

02:48:00,950 --> 02:47:59,429

so basically it's a what the beast that

4767

02:48:03,030 --> 02:48:00,960

we're looking at couldn't could just be

4768

02:48:05,670 --> 02:48:03,040

uh the small brother too it could be the

4769

02:48:07,830 --> 02:48:05,680

local beast exactly the one that we have

4770

02:48:09,269 --> 02:48:07,840

access to

4771

02:48:10,630 --> 02:48:09,279

that's mind-blowing to think about it

4772

02:48:13,030 --> 02:48:10,640

there could be something larger out

4773

02:48:14,710 --> 02:48:13,040

there like apparently the comet that you

4774

02:48:17,429 --> 02:48:14,720

know was estimated to have been about

4775

02:48:19,429 --> 02:48:17,439

like 250 kilometers across originally

4776

02:48:21,349 --> 02:48:19,439

and then then it broke apart that's

4777

02:48:22,870 --> 02:48:21,359

right and that's a whole thing that we

4778

02:48:23,830 --> 02:48:22,880

didn't get into it just shows you how

4779

02:48:27,110 --> 02:48:23,840

much there is here because it's

4780

02:48:28,469 --> 02:48:27,120

multi-disciplinary is the whole torrid

4781

02:48:30,710 --> 02:48:28,479

meteor stream

4782

02:48:32,790 --> 02:48:30,720

if people want to google that

4783

02:48:35,030 --> 02:48:32,800

that is the reoccurring

4784

02:48:35,910 --> 02:48:35,040

we go through it twice a year

4785

02:48:39,190 --> 02:48:35,920

and

4786

02:48:41,429 --> 02:48:39,200

uh one is during halloween

4787

02:48:44,469 --> 02:48:41,439

okay how where did that come from

4788

02:48:46,790 --> 02:48:44,479

and uh the others you know in late june

4789

02:48:49,349 --> 02:48:46,800

early july and that's june 30th when

4790

02:48:51,190 --> 02:48:49,359

tagusca happened and the british

4791

02:48:53,269 --> 02:48:51,200

neocatastrophes have been maintaining

4792

02:48:55,990 --> 02:48:53,279

for the last 30 years

4793

02:48:58,870 --> 02:48:56,000

in opposition to nasa that the taurid

4794

02:49:00,550 --> 02:48:58,880

meteor stream is the remnants of a

4795

02:49:03,269 --> 02:49:00,560

disintegrating comet that entered the

4796

02:49:05,429 --> 02:49:03,279

solar system roughly 20 000 years ago

4797

02:49:07,190 --> 02:49:05,439

and we have occasionally very bad

4798

02:49:07,990 --> 02:49:07,200

encounters with that stream mostly it's

4799

02:49:09,429 --> 02:49:08,000

pretty

4800

02:49:11,030 --> 02:49:09,439

meteor showers not even our biggest

4801  
02:49:13,590 --> 02:49:11,040  
meteor shower

4802  
02:49:15,590 --> 02:49:13,600  
but there's still chunks of it out there

4803  
02:49:17,830 --> 02:49:15,600  
that sometimes we hit parts of that

4804  
02:49:21,429 --> 02:49:17,840  
stream at certain periods

4805  
02:49:22,550 --> 02:49:21,439  
13 000 years ago 8 000 years ago 4 300

4806  
02:49:25,110 --> 02:49:22,560  
years ago

4807  
02:49:26,870 --> 02:49:25,120  
probably just before you know bc on

4808  
02:49:29,190 --> 02:49:26,880  
other sides of the world that weren't

4809  
02:49:31,429 --> 02:49:29,200  
recorded etc and so forth and then

4810  
02:49:32,950 --> 02:49:31,439  
recorded time so you know

4811  
02:49:34,630 --> 02:49:32,960  
i could get into some weird stuff with

4812  
02:49:37,349 --> 02:49:34,640  
tree rings and whatnot there have been

4813  
02:49:40,230 --> 02:49:37,359

five downturns since this episode where

4814

02:49:43,110 --> 02:49:40,240

every tree on earth stopped growing

4815

02:49:45,030 --> 02:49:43,120

wow you know yeah that's mike

4816

02:49:46,550 --> 02:49:45,040

bailey now i know that jared's also

4817

02:49:48,230 --> 02:49:46,560

mentioned that randall carlson goes deep

4818

02:49:50,150 --> 02:49:48,240

into the origins of halloween and its

4819

02:49:51,670 --> 02:49:50,160

relation to the to the torrids in his

4820

02:49:53,349 --> 02:49:51,680

lectures

4821

02:49:55,190 --> 02:49:53,359

so that's that's good to know randall

4822

02:49:57,110 --> 02:49:55,200

handles that he does a great job with

4823

02:50:00,309 --> 02:49:57,120

the torch and so does graham in fact

4824

02:50:02,309 --> 02:50:00,319

yeah um now lee veltman is also asking

4825

02:50:04,950 --> 02:50:02,319

and he's in and i quote this may be a

4826  
02:50:06,710 --> 02:50:04,960  
dumb question but um how was the grand

4827  
02:50:08,230 --> 02:50:06,720  
canyon formed

4828  
02:50:10,150 --> 02:50:08,240  
oh i don't know that's a great

4829  
02:50:12,710 --> 02:50:10,160  
controversial subject and

4830  
02:50:13,910 --> 02:50:12,720  
you know even the mainstream guys

4831  
02:50:15,429 --> 02:50:13,920  
they won't tell you it happened in a

4832  
02:50:16,710 --> 02:50:15,439  
weekend for sure

4833  
02:50:18,550 --> 02:50:16,720  
but they can't give you a good

4834  
02:50:20,830 --> 02:50:18,560  
explanation because it's perched up on a

4835  
02:50:22,630 --> 02:50:20,840  
plateau

4836  
02:50:24,790 --> 02:50:22,640  
huh

4837  
02:50:26,309 --> 02:50:24,800  
yeah it's up on top of something then i

4838  
02:50:28,790 --> 02:50:26,319

that's not my

4839

02:50:30,790 --> 02:50:28,800

area expertise but it's a worthy worthy

4840

02:50:32,950 --> 02:50:30,800

you know place for investigation and i

4841

02:50:35,110 --> 02:50:32,960

think you know open to questioning like

4842

02:50:36,870 --> 02:50:35,120

all science should be

4843

02:50:39,030 --> 02:50:36,880

but again it gets they get spooked by

4844

02:50:40,950 --> 02:50:39,040

creation and the creationists absolutely

4845

02:50:43,030 --> 02:50:40,960

claim you know that the grand canyon was

4846

02:50:44,469 --> 02:50:43,040

formed on a long weekend

4847

02:50:46,150 --> 02:50:44,479

well the hell they might be right but

4848

02:50:47,750 --> 02:50:46,160

that doesn't mean the earth is only 6000

4849

02:50:49,110 --> 02:50:47,760

years old they might be right about the

4850

02:50:51,030 --> 02:50:49,120

part that was formed in a weekend but

4851  
02:50:53,110 --> 02:50:51,040  
damn wrong about it the earth only being

4852  
02:50:54,550 --> 02:50:53,120  
six thousand years old right

4853  
02:50:56,550 --> 02:50:54,560  
that's why they can't they don't want to

4854  
02:50:59,670 --> 02:50:56,560  
they don't want to justify or they lend

4855  
02:51:01,349 --> 02:50:59,680  
any credence to any part of what what

4856  
02:51:03,030 --> 02:51:01,359  
might support any part of the

4857  
02:51:06,070 --> 02:51:03,040  
creationist narrative

4858  
02:51:07,429 --> 02:51:06,080  
because that's verboten you know now i'd

4859  
02:51:09,030 --> 02:51:07,439  
love to be able to have you back uh

4860  
02:51:11,190 --> 02:51:09,040  
because we've got about three minutes

4861  
02:51:12,630 --> 02:51:11,200  
left until i gotta shut her down but i'd

4862  
02:51:15,670 --> 02:51:12,640  
love to be able to invite you back for

4863  
02:51:16,950 --> 02:51:15,680

our september master class to basically

4864

02:51:18,150 --> 02:51:16,960

just go through you know a lot of the

4865

02:51:19,429 --> 02:51:18,160

stuff that we haven't gone through a lot

4866

02:51:21,190 --> 02:51:19,439

of the science in terms of the tree

4867

02:51:22,870 --> 02:51:21,200

rings and you know really really dig

4868

02:51:24,550 --> 02:51:22,880

deep for some of our so from from from

4869

02:51:26,230 --> 02:51:24,560

our listeners who are part of our

4870

02:51:27,590 --> 02:51:26,240

patreon master class because i know that

4871

02:51:29,590 --> 02:51:27,600

they really they're they're part of this

4872

02:51:31,510 --> 02:51:29,600

because they dig this [h\_\_h] and they're

4873

02:51:33,910 --> 02:51:31,520

the ones that are going to really really

4874

02:51:35,990 --> 02:51:33,920

talk to everyone about it i'd be happy

4875

02:51:38,150 --> 02:51:36,000

to do that thank you that's um a great

4876

02:51:40,389 --> 02:51:38,160

compliment i appreciate it and i'm glad

4877

02:51:41,990 --> 02:51:40,399

to help and appreciate people's patience

4878

02:51:43,590 --> 02:51:42,000

you know with technical glitches and

4879

02:51:45,110 --> 02:51:43,600

they are all my fault and will not be

4880

02:51:46,790 --> 02:51:45,120

repeated

4881

02:51:47,990 --> 02:51:46,800

and if you're saying all your fault

4882

02:51:50,309 --> 02:51:48,000

because you're part of the programming

4883

02:51:53,750 --> 02:51:50,319

team at microsoft that developed the mac

4884

02:51:56,070 --> 02:51:53,760

version of 2017 of uh powerpoint

4885

02:51:58,389 --> 02:51:56,080

uh then i can understand that

4886

02:52:01,349 --> 02:51:58,399

i don't you know i've got a 27 inch imac

4887

02:52:02,469 --> 02:52:01,359

with whatever 18 megs a damn ram i don't

4888

02:52:04,389 --> 02:52:02,479

know what happened i've never had

4889

02:52:06,950 --> 02:52:04,399

crashes like this you know i guess it is

4890

02:52:08,950 --> 02:52:06,960

just you know the the the forces of

4891

02:52:11,110 --> 02:52:08,960

darkness not wanting this uh esoteric

4892

02:52:13,670 --> 02:52:11,120

knowledge revealed right

4893

02:52:15,269 --> 02:52:13,680

exactly um so again for everyone else

4894

02:52:17,030 --> 02:52:15,279

who's out there i'm going to be playing

4895

02:52:20,309 --> 02:52:17,040

like normally we'd be doing the sandwich

4896

02:52:22,950 --> 02:52:20,319

counter but i know that um uh

4897

02:52:24,790 --> 02:52:22,960

michael huntington is off uh

4898

02:52:25,750 --> 02:52:24,800

uh hunting for

4899

02:52:29,910 --> 02:52:25,760

um

4900

02:52:31,429 --> 02:52:29,920

be gone for the next two weeks i'm gonna

4901  
02:52:33,269 --> 02:52:31,439  
be on vacation next week so this is our

4902  
02:52:35,670 --> 02:52:33,279  
last live show until the end of the

4903  
02:52:37,269 --> 02:52:35,680  
month uh and then we've got like four

4904  
02:52:38,790 --> 02:52:37,279  
episodes in the space of a week and a

4905  
02:52:41,269 --> 02:52:38,800  
half i think or three episodes in the

4906  
02:52:42,710 --> 02:52:41,279  
space of a week and a half so you're you

4907  
02:52:44,950 --> 02:52:42,720  
know we'll get this up sometime next

4908  
02:52:47,590 --> 02:52:44,960  
week uh for the audio podcast and i'll

4909  
02:52:49,590 --> 02:52:47,600  
be able to put the the pdfs up for

4910  
02:52:51,830 --> 02:52:49,600  
everybody everyone else out there

4911  
02:52:53,429 --> 02:52:51,840  
but uh i'm going to play a song i

4912  
02:52:56,230 --> 02:52:53,439  
haven't played on here for a very long

4913  
02:52:57,830 --> 02:52:56,240

time which is uh i think i might be able

4914

02:52:59,429 --> 02:52:57,840

to play it you know let's play i'm going

4915

02:53:01,110 --> 02:52:59,439

to play scattered knowledge

4916

02:53:03,269 --> 02:53:01,120

because uh well

4917

02:53:05,110 --> 02:53:03,279

this is the very apropos

4918

02:53:06,389 --> 02:53:05,120

for everyone else out there

4919

02:53:08,790 --> 02:53:06,399

so

4920

02:53:12,469 --> 02:53:08,800

there we go this is still one that we

4921

02:53:13,349 --> 02:53:12,479

don't get uh dinged on from youtube for

4922

02:53:15,269 --> 02:53:13,359

uh

4923

02:53:17,030 --> 02:53:15,279

copyright violations because like we get

4924

02:53:18,469 --> 02:53:17,040

a lot of you know

4925

02:53:20,309 --> 02:53:18,479

creative commons music and sometimes

4926

02:53:22,070 --> 02:53:20,319

they'll change the monetization of it

4927

02:53:24,150 --> 02:53:22,080

without me even knowing it

4928

02:53:25,830 --> 02:53:24,160

but this is also one of my favorites and

4929

02:53:27,910 --> 02:53:25,840

video apropos

4930

02:53:31,190 --> 02:53:27,920

so ladies and gentlemen this has been

4931

02:53:34,309 --> 02:53:31,200

the 51st episode of the den of lore uh

4932

02:53:35,590 --> 02:53:34,319

please do check out patreon.com

4933

02:53:37,750 --> 02:53:35,600

forward slash denver if you want to

4934

02:53:39,590 --> 02:53:37,760

support for as little as one dollar if

4935

02:53:41,190 --> 02:53:39,600

you want to get in on the master class

4936

02:53:43,429 --> 02:53:41,200

sign up for our nine dollar a month uh

4937

02:53:45,750 --> 02:53:43,439

support level and you get a ton of other

4938

02:53:48,070 --> 02:53:45,760

perks with that as well uh i've even

4939

02:53:50,950 --> 02:53:48,080

included an illustrious master

4940

02:53:52,469 --> 02:53:50,960

level which is 99 a month we're only

4941

02:53:53,910 --> 02:53:52,479

gonna have four of those available at

4942

02:53:55,590 --> 02:53:53,920

any time and what that actually gives

4943

02:53:57,030 --> 02:53:55,600

you is a chance to come on and once a

4944

02:53:59,990 --> 02:53:57,040

month you get to guest host the show

4945

02:54:01,990 --> 02:54:00,000

with me uh with a guest um you know just

4946

02:54:03,429 --> 02:54:02,000

on the show so it gives us that little

4947

02:54:05,349 --> 02:54:03,439

bit extra support so i can maybe hire

4948

02:54:08,070 --> 02:54:05,359

somebody to take care of the production

4949

02:54:11,830 --> 02:54:08,080

and not have 15 monitors in front of me

4950

02:54:16,389 --> 02:54:13,830

and at the at you know at the end of it

4951

02:54:19,910 --> 02:54:16,399

it's just all about finding that groove

4952

02:54:21,349 --> 02:54:19,920

so to our masters out there uh let me

4953

02:54:24,630 --> 02:54:21,359

just repeat the names one more time mark

4954

02:54:28,389 --> 02:54:24,640

catalano elementary joshua matako kevin

4955

02:54:29,750 --> 02:54:28,399

fothe wayne rose's mrs fox jared thank

4956

02:54:32,950 --> 02:54:29,760

you very much for supporting us with our

4957

02:54:35,910 --> 02:54:32,960

masters program uh to venice to hobby

4958

02:54:37,670 --> 02:54:35,920

atlantic couch sentient michael and dean

4959

02:54:40,790 --> 02:54:37,680

thank you very much for supporting uh

4960

02:54:42,309 --> 02:54:40,800

the show every little bit helps and um

4961

02:54:43,190 --> 02:54:42,319

you know what this has been the den of

4962

02:54:46,070 --> 02:54:43,200

lore

4963

02:54:48,870 --> 02:54:46,080

uh i am your host chris george zuger and

4964

02:54:50,389 --> 02:54:48,880

i've been joined by mr george howard in

4965

02:54:53,110 --> 02:54:50,399

what has been one of the most

4966

02:54:55,510 --> 02:54:53,120

mind-blowing episodes we've done

4967

02:54:56,870 --> 02:54:55,520

in one year of

4968

02:54:57,590 --> 02:54:56,880

the den of lore

4969

02:55:00,950 --> 02:54:57,600

so

4970

02:55:02,790 --> 02:55:00,960

thank you all out there and um

4971

02:55:04,550 --> 02:55:02,800

if you've only come in halfway through

4972

02:55:07,670 --> 02:55:04,560

go back and watch the rest cause you

4973

02:55:08,550 --> 02:55:07,680

missed a [h\_\_h] ton of mind-blowing stuff

4974

02:55:11,110 --> 02:55:08,560

uh

4975

02:55:13,670 --> 02:55:11,120

yeah that is all

4976

02:55:15,510 --> 02:55:13,680

and um dean just or

4977

02:55:16,870 --> 02:55:15,520

sorry george just to stick on the line

4978

02:55:18,950 --> 02:55:16,880

here while i

4979

02:55:20,790 --> 02:55:18,960

feed us out and once your business stops

4980

02:55:22,230 --> 02:55:20,800

we'll i'll i'll give you my good

4981

02:55:24,070 --> 02:55:22,240

goodbyes

4982

02:55:30,450 --> 02:55:24,080

cheers everybody i'll see you all live

4983

02:55:35,540 --> 02:55:33,140

[Music]

4984

02:56:25,030 --> 02:55:35,550

[Applause]