

1
00:00:06,139 --> 00:00:13,689
welcome to the skeptic zone the podcast

2
00:00:09,109 --> 00:00:13,689
from Australia for science and reason

3
00:00:23,059 --> 00:00:28,739
hello and welcome to the skeptic zone

4
00:00:25,559 --> 00:00:30,929
today is july 13 2013 and this is your

5
00:00:28,739 --> 00:00:34,019
host Steve a novella joining me this

6
00:00:30,929 --> 00:00:37,619
week are Richard Saunders hello Bob

7
00:00:34,020 --> 00:00:40,800
novella hey everybody Jay novella hey

8
00:00:37,619 --> 00:00:42,869
guys and Chris Brown well hello again

9
00:00:40,799 --> 00:00:45,000
everyone now you haven't picked the

10
00:00:42,869 --> 00:00:47,669
wrong podcast folks this is the skipping

11
00:00:45,000 --> 00:00:49,109
stone after all but I'm with my good

12
00:00:47,670 --> 00:00:50,340
friends here from the skeptics guide to

13
00:00:49,109 --> 00:00:52,979
the universe Wow we're all here at the

14
00:00:50,340 --> 00:00:54,870
end of this huge hallway outside the

15
00:00:52,979 --> 00:00:57,238
ballroom where the conventions going on

16
00:00:54,869 --> 00:01:00,119
the amazing reading how many times is

17
00:00:57,238 --> 00:01:02,549
this for you now Steve I think this is

18
00:01:00,119 --> 00:01:04,439
sex right we started with the fifth one

19
00:01:02,549 --> 00:01:08,069
this is the eleventh one that exactly

20
00:01:04,439 --> 00:01:10,769
this is 11 yeah so 60 then 77 I can Wow

21
00:01:08,069 --> 00:01:12,359
including Tammy Australia I would make

22
00:01:10,769 --> 00:01:14,759
eight if you include time Australia

23
00:01:12,359 --> 00:01:16,859
hello yeah that's fantastic and your

24
00:01:14,759 --> 00:01:18,989
table is about six or seven tables down

25
00:01:16,859 --> 00:01:20,879
the hall from here a busy table I bet

26
00:01:18,989 --> 00:01:22,618
yeah we do we love coming to these

27
00:01:20,879 --> 00:01:24,269
conventions and they were talking to our

28
00:01:22,618 --> 00:01:26,280
listeners in this pre I pretty steady

29

00:01:24,269 --> 00:01:28,140
stream past the table absolutely yeah

30
00:01:26,280 --> 00:01:29,879
it's good and you've got the power bands

31
00:01:28,140 --> 00:01:32,129
this time the SGU power bands are you're

32
00:01:29,879 --> 00:01:33,449
wearing one Bob yes but my favorite

33
00:01:32,129 --> 00:01:35,009
color black of course i love it i love

34
00:01:33,450 --> 00:01:37,109
scene skeptics guide to the universe on

35
00:01:35,009 --> 00:01:38,459
this band although one of my problems

36
00:01:37,109 --> 00:01:39,810
with these bands that I'm afraid people

37
00:01:38,459 --> 00:01:41,759
will see it and think it's a real power

38
00:01:39,810 --> 00:01:42,868
balance band and if I don't talk to them

39
00:01:41,759 --> 00:01:45,390
and explain to them they're gonna think

40
00:01:42,868 --> 00:01:49,170
I'm I'm supporting this crap but oh well

41
00:01:45,390 --> 00:01:51,149
and I'm sad to say that after running

42
00:01:49,170 --> 00:01:54,709
through space and time evil captain j

43
00:01:51,149 --> 00:01:57,420

novella has caught me Captain Saunders

44

00:01:54,709 --> 00:01:59,039

good to see you Jay good to see Kourtney

45

00:01:57,420 --> 00:02:01,709

here too yeah we wanted to bring the

46

00:01:59,039 --> 00:02:03,299

baby but we didn't so I yeah he's home

47

00:02:01,709 --> 00:02:06,000

we can't wait to go home tomorrow yeah

48

00:02:03,299 --> 00:02:07,829

that's right that's right well folks

49

00:02:06,000 --> 00:02:09,270

coming up on this week's show not too

50

00:02:07,829 --> 00:02:10,348

much to do with the amazing meeting that

51

00:02:09,270 --> 00:02:12,599

will be coming up in the weeks to come

52

00:02:10,348 --> 00:02:14,549

but we have an extended interview with

53

00:02:12,598 --> 00:02:16,348

dr. Eugenie Scott from the National

54

00:02:14,550 --> 00:02:18,660

Center for Science Education a favorite

55

00:02:16,348 --> 00:02:21,689

of everybody I think she's a wonderful

56

00:02:18,659 --> 00:02:24,568

lady yeah it's it's a sad to hear that

57

00:02:21,689 --> 00:02:27,359

she's retiring but you know AI guess you

58
00:02:24,568 --> 00:02:29,579
can't keep going forever but she's done

59
00:02:27,360 --> 00:02:31,200
an amazing job at the NCSE and now we're

60
00:02:29,580 --> 00:02:32,400
just waiting to see who can possibly

61
00:02:31,199 --> 00:02:34,889
fill her shoes

62
00:02:32,400 --> 00:02:36,390
organization it's hard to imagine it's

63
00:02:34,889 --> 00:02:38,609
hard to imagine so perfect for that role

64
00:02:36,389 --> 00:02:39,899
what we'll do that we'll start that

65
00:02:38,610 --> 00:02:41,760
interview rolling and while that's

66
00:02:39,900 --> 00:02:43,110
happening I'm going to run down to in

67
00:02:41,759 --> 00:02:45,719
the hall I'm going to grab a large

68
00:02:43,110 --> 00:02:49,640
coffee and a Vegemite bagel and I'll let

69
00:02:45,719 --> 00:02:49,639
you enjoy the skeptic zone gross

70
00:03:07,810 --> 00:03:12,199
I'm delighted absolutely delighted to be

71
00:03:10,609 --> 00:03:14,209
back here once again at the National

72
00:03:12,199 --> 00:03:16,009
Center for Science Education with my

73
00:03:14,209 --> 00:03:18,709
good friend don't pee Eugenie Scott

74
00:03:16,009 --> 00:03:20,479
hello Jeanie hello Richard so good to be

75
00:03:18,709 --> 00:03:22,239
back thank you i was should have been

76
00:03:20,479 --> 00:03:24,919
here a few days ago but I was sort of

77
00:03:22,239 --> 00:03:26,750
having a bit of a rough time with the

78
00:03:24,919 --> 00:03:28,759
rotten bug I picked up but I'm feeling

79
00:03:26,750 --> 00:03:30,560
much better well if you start hacking

80
00:03:28,759 --> 00:03:32,989
and wheezing will forgive you thank you

81
00:03:30,560 --> 00:03:36,469
well we'll blame it on our West Coast

82
00:03:32,989 --> 00:03:37,878
viruses that that you not not that

83
00:03:36,469 --> 00:03:39,709
you're such a hothouse flower from

84
00:03:37,878 --> 00:03:41,780
Australia but you have not experienced

85
00:03:39,709 --> 00:03:43,400
such things but you know we have

86

00:03:41,780 --> 00:03:45,680
different viruses than you do so you get

87
00:03:43,400 --> 00:03:47,120
you get cut a little slack now these are

88
00:03:45,680 --> 00:03:48,799
that interesting it's so this is an

89
00:03:47,120 --> 00:03:51,019
interesting segue into evolution isn't

90
00:03:48,799 --> 00:03:55,430
it you GT because everything every same

91
00:03:51,019 --> 00:03:57,650
way you cannot escape you cannot imagine

92
00:03:55,430 --> 00:03:58,790
if there was only one cold virus or

93
00:03:57,650 --> 00:04:00,680
something like that it would have been

94
00:03:58,789 --> 00:04:02,598
knocked on the head years ago I mean you

95
00:04:00,680 --> 00:04:04,099
get a good get at once and your body

96
00:04:02,598 --> 00:04:05,478
would build up the immunity then you

97
00:04:04,098 --> 00:04:08,328
could sell through the rest of your life

98
00:04:05,479 --> 00:04:09,979
quite happily but no LS and that poor

99
00:04:08,329 --> 00:04:11,810
little virus would have to keep looking

100
00:04:09,979 --> 00:04:16,069

for other creatures to infect in order

101

00:04:11,810 --> 00:04:17,988

to yes well from a viruses standpoint

102

00:04:16,069 --> 00:04:20,959

you you obviously do want to have those

103

00:04:17,988 --> 00:04:23,299

those mutations taking place to shift

104

00:04:20,959 --> 00:04:25,788

shift around his genome a bit so i must

105

00:04:23,300 --> 00:04:27,288

mutate incredibly quickly they do yeah

106

00:04:25,788 --> 00:04:28,969

that's the nature of iris this is

107

00:04:27,288 --> 00:04:31,189

another thing we've never discussed and

108

00:04:28,970 --> 00:04:34,580

it's sort of just yeah what real science

109

00:04:31,189 --> 00:04:37,788

there's no the evolution of Votto a

110

00:04:34,579 --> 00:04:39,319

skeptic sir so good yeah well I think

111

00:04:37,788 --> 00:04:41,360

we've gone about as deep into the

112

00:04:39,319 --> 00:04:46,129

evolution of viruses as i understand i

113

00:04:41,360 --> 00:04:51,050

do know that there is such a huge huge

114

00:04:46,129 --> 00:04:53,149

number of versions of the cold virus I

115
00:04:51,050 --> 00:04:55,848
mean but you know one of the things that

116
00:04:53,149 --> 00:04:58,638
is really interesting about viral

117
00:04:55,848 --> 00:05:01,579
diseases like coals and mumps and things

118
00:04:58,639 --> 00:05:03,439
like that is it's very very likely that

119
00:05:01,579 --> 00:05:06,109
Neanderthals never suffered from them

120
00:05:03,439 --> 00:05:07,910
really yeah because in order to really

121
00:05:06,110 --> 00:05:10,910
get a virus going

122
00:05:07,910 --> 00:05:12,560
in terms of transmissibility from one

123
00:05:10,910 --> 00:05:15,740
host to another you have to have a

124
00:05:12,560 --> 00:05:20,149
pretty good-sized population and until

125
00:05:15,740 --> 00:05:23,210
really until frankly the agricultural

126
00:05:20,149 --> 00:05:25,159
revolution humans just did not live in

127
00:05:23,209 --> 00:05:27,829
big enough communities to keep a virus

128
00:05:25,160 --> 00:05:29,390
code ever thought about that yeah well

129
00:05:27,829 --> 00:05:32,560
anthropologist think about this kind of

130
00:05:29,389 --> 00:05:34,849
stuff all the time so glad you came by

131
00:05:32,560 --> 00:05:36,050
you weren't as fascinating you wouldn't

132
00:05:34,850 --> 00:05:39,200
see in the end result with a runny nose

133
00:05:36,050 --> 00:05:40,520
maybe wealthy and probably not well they

134
00:05:39,199 --> 00:05:42,769
have another Neanderthal smacked a

135
00:05:40,519 --> 00:05:45,199
minute that's not what you're talking

136
00:05:42,769 --> 00:05:46,789
about yeah yeah nope no Neanderthal

137
00:05:45,199 --> 00:05:49,269
would have suffered my friend Richard as

138
00:05:46,790 --> 00:05:54,319
you have these last few could take

139
00:05:49,269 --> 00:05:58,490
wheezing and hacking away they now

140
00:05:54,319 --> 00:06:01,579
bacterial diseases are different but

141
00:05:58,490 --> 00:06:04,579
viral diseases as I understand it really

142
00:06:01,579 --> 00:06:06,709
do require a pretty good-sized host

143

00:06:04,579 --> 00:06:08,750
reservoir in order to maintain

144
00:06:06,709 --> 00:06:10,489
themselves well and when what better

145
00:06:08,750 --> 00:06:12,100
host reservoir than the human race at

146
00:06:10,490 --> 00:06:14,000
the moment we're especially with the

147
00:06:12,100 --> 00:06:16,220
intercontinental travel and all the rest

148
00:06:14,000 --> 00:06:18,800
of it oh we can swap around Moses light

149
00:06:16,220 --> 00:06:21,800
in nothing flat yeah that's actually one

150
00:06:18,800 --> 00:06:24,949
of the one of the staples of science

151
00:06:21,800 --> 00:06:28,100
videos it is yeah epidemic driver

152
00:06:24,949 --> 00:06:31,479
struggle that game and and on up in him

153
00:06:28,100 --> 00:06:34,780
yeah yeah did you ever read a book now

154
00:06:31,480 --> 00:06:37,280
we might actually talk about something a

155
00:06:34,779 --> 00:06:39,500
substantial at some point but speaking

156
00:06:37,279 --> 00:06:41,959
of speaking of fiction that deals with

157
00:06:39,500 --> 00:06:44,209

apocalyptic viruses it's wiping us out

158

00:06:41,959 --> 00:06:46,930

did you have to read an old old book

159

00:06:44,209 --> 00:06:49,279

written in the 50s called earth abides a

160

00:06:46,930 --> 00:06:51,319

counselor that I have no yeah well it

161

00:06:49,279 --> 00:06:53,739

for any of your listeners who are

162

00:06:51,319 --> 00:06:59,740

looking for kind of a real pioneering

163

00:06:53,740 --> 00:07:02,300

science fiction book of this genre of

164

00:06:59,740 --> 00:07:04,460

the majority of the species gets wiped

165

00:07:02,300 --> 00:07:08,620

out you a very short period of time and

166

00:07:04,459 --> 00:07:13,789

you have small group groups of people

167

00:07:08,620 --> 00:07:16,280

living in there the physical plant shall

168

00:07:13,790 --> 00:07:18,849

we say of humanity the cities are there

169

00:07:16,279 --> 00:07:20,799

it's just people who died base

170

00:07:18,848 --> 00:07:22,990

earth abides was written by a geographer

171

00:07:20,800 --> 00:07:25,088

and of course now I can't remember his

172
00:07:22,990 --> 00:07:27,209
first name last name is Stuart it'll

173
00:07:25,088 --> 00:07:30,158
George Stewart something like that mmm

174
00:07:27,209 --> 00:07:32,829
written in the 50s and he was actually a

175
00:07:30,158 --> 00:07:35,860
geology oh sorry geography professor at

176
00:07:32,829 --> 00:07:38,889
UC Berkeley and he wrote this book about

177
00:07:35,860 --> 00:07:41,679
what happens if you take away most of

178
00:07:38,889 --> 00:07:44,079
the humans on the planet but you leave

179
00:07:41,678 --> 00:07:47,049
the sort of the physical plant of

180
00:07:44,079 --> 00:07:48,848
civilization and you leave you know

181
00:07:47,050 --> 00:07:52,389
plants and animals pretty much as they

182
00:07:48,848 --> 00:07:54,759
are um what happens over time and has a

183
00:07:52,389 --> 00:07:57,519
geographer he really does integrate a

184
00:07:54,759 --> 00:08:00,669
lot of science into it one of the things

185
00:07:57,519 --> 00:08:04,179
that happens according to his reading of

186
00:08:00,668 --> 00:08:05,918
natural history is that bright red

187
00:08:04,178 --> 00:08:08,228
flowers that that human beings have

188
00:08:05,918 --> 00:08:09,698
selected for our ornamental flowers with

189
00:08:08,228 --> 00:08:12,579
there tends to be a disproportionate

190
00:08:09,699 --> 00:08:16,869
number of bright reds they tend to be

191
00:08:12,579 --> 00:08:18,579
much more much less common um and I

192
00:08:16,869 --> 00:08:20,379
forget exactly what the reason for this

193
00:08:18,579 --> 00:08:22,899
probably has to do with pollination yeah

194
00:08:20,379 --> 00:08:25,539
and what kinds of things pollinating

195
00:08:22,899 --> 00:08:27,550
insects see more easily than others it's

196
00:08:25,538 --> 00:08:29,348
it's been a long time I think I better

197
00:08:27,550 --> 00:08:32,528
go back and reread it I it's because I'm

198
00:08:29,348 --> 00:08:35,918
enjoying thinking about it and what

199
00:08:32,528 --> 00:08:39,208
happens to dogs when people are no

200

00:08:35,918 --> 00:08:41,528
longer really maintaining the

201
00:08:39,208 --> 00:08:42,938
specialized breeds that we have you

202
00:08:41,528 --> 00:08:44,789
could imagine what would have the dogs

203
00:08:42,938 --> 00:08:46,990
yeah well after a couple of generations

204
00:08:44,789 --> 00:08:49,240
you kind of get back to your basic

205
00:08:46,990 --> 00:08:52,990
yellow dog probably as we don't refer to

206
00:08:49,240 --> 00:08:55,389
them in the south what I've sometimes

207
00:08:52,990 --> 00:08:58,120
jokingly call I love dogs and you know

208
00:08:55,389 --> 00:08:59,740
when I retire I'm going to get a dog I

209
00:08:58,120 --> 00:09:01,060
don't know what my husband that isn't

210
00:08:59,740 --> 00:09:02,740
what your cats going to say about well

211
00:09:01,059 --> 00:09:04,208
yeah my cats not going to be too happy

212
00:09:02,740 --> 00:09:06,519
neither is my husband we got to work

213
00:09:04,208 --> 00:09:10,869
this out but I am dog deprived i really

214
00:09:06,519 --> 00:09:12,789

need a dog but you know the dogs that

215

00:09:10,870 --> 00:09:15,639

you find in the archaeological record

216

00:09:12,789 --> 00:09:17,649

the first domesticated dogs well that

217

00:09:15,639 --> 00:09:20,350

you find in any kind of number are in

218

00:09:17,649 --> 00:09:22,688

the Middle East around you know three

219

00:09:20,350 --> 00:09:26,920

four thousand years ago nuh tophian a

220

00:09:22,688 --> 00:09:30,068

culture archaeologically speaking these

221

00:09:26,919 --> 00:09:32,559

dogs were sort of medium-sized they were

222

00:09:30,068 --> 00:09:36,599

very generic they did

223

00:09:32,559 --> 00:09:36,599

look especially wolfish like you find

224

00:09:36,990 --> 00:09:45,190

Huskies and and dogs like German

225

00:09:42,759 --> 00:09:47,830

Shepherds they didn't have the bizarre

226

00:09:45,190 --> 00:09:50,470

features like the achondroplastic legs

227

00:09:47,830 --> 00:09:52,180

like you find on dachshunds or the

228

00:09:50,470 --> 00:09:53,528

squashed faces you have to find in some

229
00:09:52,179 --> 00:09:56,049
of the pugs and there are other animals

230
00:09:53,528 --> 00:09:58,539
we obviously don't know what kind of

231
00:09:56,049 --> 00:10:00,309
coats they had long or short but they

232
00:09:58,539 --> 00:10:01,919
did have curly tails which is something

233
00:10:00,309 --> 00:10:04,088
that shows up fairly early and

234
00:10:01,919 --> 00:10:06,189
domesticated dogs and also in

235
00:10:04,089 --> 00:10:07,779
domesticated foxes you know those

236
00:10:06,190 --> 00:10:09,700
studies that were done it's it's one of

237
00:10:07,778 --> 00:10:12,159
these canid traits that doesn't occur

238
00:10:09,700 --> 00:10:13,870
much in the wild but which human beings

239
00:10:12,159 --> 00:10:17,049
when they see they kind of likes they

240
00:10:13,870 --> 00:10:20,049
select for it but probably getting back

241
00:10:17,049 --> 00:10:21,639
to Stewart's earth abides probably dogs

242
00:10:20,049 --> 00:10:24,490
would sort of go back to that kind of

243
00:10:21,639 --> 00:10:26,559
basic know to phien middle-sized no

244
00:10:24,490 --> 00:10:29,639
special characteristics just your your

245
00:10:26,559 --> 00:10:34,929
basic four-on-the-floor candid your and

246
00:10:29,639 --> 00:10:36,970
cats on the other hand do just fine no

247
00:10:34,929 --> 00:10:39,789
problem with them surviving they do just

248
00:10:36,970 --> 00:10:44,290
fine yeah but it's a great book it

249
00:10:39,789 --> 00:10:46,779
really is very interesting sheep sheeps

250
00:10:44,289 --> 00:10:48,819
days are numbered sheep don't really do

251
00:10:46,779 --> 00:10:50,829
very well without human being stick I

252
00:10:48,820 --> 00:10:53,800
know a large numbers that we have them

253
00:10:50,830 --> 00:10:56,020
on the planet that's purely physically

254
00:10:53,799 --> 00:10:59,859
and besides there aren't exactly

255
00:10:56,019 --> 00:11:01,779
selected anymore for their wit they're

256
00:10:59,860 --> 00:11:04,000
pretty Dumbo they're pretty goats on the

257

00:11:01,779 --> 00:11:06,009
other hand goats on the other hand are

258
00:11:04,000 --> 00:11:07,480
much more adaptable so he sort of goes

259
00:11:06,009 --> 00:11:10,870
through all of the different you know

260
00:11:07,480 --> 00:11:13,570
domesticated animals sweet corn forget

261
00:11:10,870 --> 00:11:17,070
it it you know it is such a fragile

262
00:11:13,570 --> 00:11:23,740
plant in the sense that we have selected

263
00:11:17,070 --> 00:11:26,350
maize or sweet corn to be this high

264
00:11:23,740 --> 00:11:30,070
highly starchy but impossible to

265
00:11:26,350 --> 00:11:32,980
reproduce on its own timing when there's

266
00:11:30,070 --> 00:11:35,589
just all sorts of reasons why why corn

267
00:11:32,980 --> 00:11:38,670
and its little husks and everything just

268
00:11:35,589 --> 00:11:40,959
isn't set up to reproduce itself yeah so

269
00:11:38,669 --> 00:11:41,289
people basically go back to hunting him

270
00:11:40,958 --> 00:11:43,479
down

271
00:11:41,289 --> 00:11:45,929

in this book which is kind of a plot

272

00:11:43,480 --> 00:11:49,750

line that you find in a lot of these

273

00:11:45,929 --> 00:11:52,599

post apocalypse apocalyptic books guess

274

00:11:49,750 --> 00:11:56,620

you'd have to depends on the size of the

275

00:11:52,600 --> 00:11:59,470

population but there's a huge you know

276

00:11:56,620 --> 00:12:02,259

in this story I think it was a virus

277

00:11:59,470 --> 00:12:05,819

that spread very quickly and only a

278

00:12:02,259 --> 00:12:08,860

small number of people in earth abides

279

00:12:05,818 --> 00:12:12,099

were naturally resistant to the virus

280

00:12:08,860 --> 00:12:14,259

and oddly enough people who had been

281

00:12:12,100 --> 00:12:16,600

bitten by a rattlesnake who just you

282

00:12:14,259 --> 00:12:20,169

know happened to produce antibodies that

283

00:12:16,600 --> 00:12:22,449

were close enough to the natural

284

00:12:20,169 --> 00:12:24,009

antibodies that some people had that

285

00:12:22,448 --> 00:12:25,149

they were able to fight off this printer

286
00:12:24,009 --> 00:12:26,620
people haven't been bitten by a

287
00:12:25,149 --> 00:12:29,289
rattlesnake are there going to be a very

288
00:12:26,620 --> 00:12:32,679
small number yes exactly so most people

289
00:12:29,289 --> 00:12:34,659
die in this in this great epidemic but

290
00:12:32,679 --> 00:12:37,388
anyway it's a fun book it's it's worth

291
00:12:34,659 --> 00:12:40,689
it shouldn't be confined to the scrap

292
00:12:37,389 --> 00:12:42,399
heap of science fiction history it

293
00:12:40,690 --> 00:12:44,290
should be revived at regular intervals

294
00:12:42,399 --> 00:12:45,549
because it's it's well done it sounds

295
00:12:44,289 --> 00:12:46,899
like it would make a great movie but of

296
00:12:45,549 --> 00:12:49,359
course this sort of movie has been them

297
00:12:46,899 --> 00:12:51,669
hmm so you seem to be a lot of movies

298
00:12:49,360 --> 00:12:54,490
about this I'm not what's a good story

299
00:12:51,669 --> 00:12:57,370
uh-huh it's it's a great what a story

300
00:12:54,490 --> 00:12:59,409
okay sure I'm surprised just looking

301
00:12:57,370 --> 00:13:00,970
around this this room this is a new room

302
00:12:59,409 --> 00:13:02,919
you have here at the National Center for

303
00:13:00,970 --> 00:13:06,220
Science Education this is your new

304
00:13:02,919 --> 00:13:08,559
conference media office I guess you'd

305
00:13:06,220 --> 00:13:11,410
say it's a lovely big room it's welded

306
00:13:08,559 --> 00:13:14,979
with bookshelves and skulls everywhere

307
00:13:11,409 --> 00:13:18,669
fossils of our our collection of fossils

308
00:13:14,980 --> 00:13:20,920
we've got mostly fastball almost

309
00:13:18,669 --> 00:13:24,039
entirely fossil humans occasionally we

310
00:13:20,919 --> 00:13:26,799
have the the rare primate and of course

311
00:13:24,039 --> 00:13:29,889
we have orangs and gorillas in the chimp

312
00:13:26,799 --> 00:13:31,740
Oh any other in yonder t-rex what's a

313
00:13:29,889 --> 00:13:35,860
conference room without a dinosaur there

314

00:13:31,740 --> 00:13:39,698
there you go yeah the easy to spot we

315
00:13:35,860 --> 00:13:42,730
remodeled a chunk of our archives into a

316
00:13:39,698 --> 00:13:45,240
conference room when the we added the

317
00:13:42,730 --> 00:13:49,300
two new climate change staff members and

318
00:13:45,240 --> 00:13:53,680
I'm afraid our small office is just with

319
00:13:49,299 --> 00:13:54,849
our open cubicle framework just it was

320
00:13:53,679 --> 00:13:56,919
they was just too noisy

321
00:13:54,850 --> 00:13:59,860
needed a place where people could have

322
00:13:56,919 --> 00:14:03,698
conference calls have media interviews

323
00:13:59,860 --> 00:14:05,019
do the occasional podcast yes and when

324
00:14:03,698 --> 00:14:08,679
one of the things that we're hoping to

325
00:14:05,019 --> 00:14:10,360
get is to get some lights appropriate

326
00:14:08,679 --> 00:14:11,948
lights and reflectors so that we can

327
00:14:10,360 --> 00:14:14,409
actually do some filming in here as well

328
00:14:11,948 --> 00:14:16,809

oh it would be great because of the the

329

00:14:14,409 --> 00:14:18,610

the backdrop of all these bookshelves or

330

00:14:16,809 --> 00:14:20,518

skulls and books well I think so

331

00:14:18,610 --> 00:14:22,870

scholarly they would have our stuff

332

00:14:20,519 --> 00:14:25,659

nothing like a wood background here I

333

00:14:22,870 --> 00:14:28,389

but you know you can't really you can't

334

00:14:25,659 --> 00:14:30,519

really do good film unless you have the

335

00:14:28,389 --> 00:14:32,948

proper lighting that's true I know that

336

00:14:30,519 --> 00:14:35,350

very well yes indeed we have some we

337

00:14:32,948 --> 00:14:37,000

have some promo pieces on our youtube

338

00:14:35,350 --> 00:14:40,778

site that every time i see i kind of

339

00:14:37,000 --> 00:14:44,230

cringe because everybody looks so awful

340

00:14:40,778 --> 00:14:46,208

you don't know well in the sense that

341

00:14:44,230 --> 00:14:48,850

the lights hitting the face is wrong and

342

00:14:46,208 --> 00:14:49,899

you know everything you end up even if

343
00:14:48,850 --> 00:14:54,129
you don't have bags under your eyes

344
00:14:49,899 --> 00:14:55,509
that's what you wind up with the lights

345
00:14:54,129 --> 00:14:58,328
coming in at the wrong angle and

346
00:14:55,509 --> 00:15:00,278
whatever so hopefully we'll we'll be

347
00:14:58,328 --> 00:15:02,649
able to get somebody to donate some

348
00:15:00,278 --> 00:15:04,958
lights if you're listening we have a we

349
00:15:02,649 --> 00:15:07,629
have some listed on amazon wish list or

350
00:15:04,958 --> 00:15:09,458
we'll get a grant and get some

351
00:15:07,629 --> 00:15:10,958
appropriate lights and maybe do some

352
00:15:09,458 --> 00:15:12,609
more YouTube stuff I'm looking forward

353
00:15:10,958 --> 00:15:15,129
to that that would be good YouTube stuff

354
00:15:12,610 --> 00:15:17,199
is always pretty important I think now

355
00:15:15,129 --> 00:15:19,240
you need it's not that long ago I was

356
00:15:17,198 --> 00:15:21,099
here intervening you about the fact that

357
00:15:19,240 --> 00:15:24,370
you've taken on this whole new area of a

358
00:15:21,100 --> 00:15:26,470
climate change when was that we got our

359
00:15:24,370 --> 00:15:29,470
first funding for the climate change

360
00:15:26,470 --> 00:15:33,040
initiative in the summer of 2011 and in

361
00:15:29,470 --> 00:15:35,199
the fall of 2011 mark McCaffrey came on

362
00:15:33,039 --> 00:15:38,588
and we started preparing to launch so to

363
00:15:35,198 --> 00:15:41,169
speak and in I think with January of

364
00:15:38,589 --> 00:15:43,149
2012 we announced the climate change

365
00:15:41,169 --> 00:15:45,159
initiative and so it's been about a year

366
00:15:43,149 --> 00:15:46,929
and a half ok yeah we got a little

367
00:15:45,159 --> 00:15:50,289
additional funding from an anonymous

368
00:15:46,929 --> 00:15:52,479
donor who which was very gratefully

369
00:15:50,289 --> 00:15:54,938
received and we were able to hire our

370
00:15:52,480 --> 00:15:57,789
second climate change person minda

371

00:15:54,938 --> 00:16:01,120
Rebecca it was a biologist does ecology

372
00:15:57,789 --> 00:16:05,079
things and so now we have a good strong

373
00:16:01,120 --> 00:16:07,980
staff and we're starting to

374
00:16:05,080 --> 00:16:12,730
starting some really very interesting

375
00:16:07,980 --> 00:16:15,730
projects that I think will will help a

376
00:16:12,730 --> 00:16:22,060
lot in terms of getting the science of

377
00:16:15,730 --> 00:16:24,850
climate change into the schools helping

378
00:16:22,059 --> 00:16:26,679
teachers to deal with the pushback that

379
00:16:24,850 --> 00:16:29,019
they get not just from evolution but

380
00:16:26,679 --> 00:16:30,579
also from climate change yeah yeah which

381
00:16:29,019 --> 00:16:33,699
of course why we took this tough this

382
00:16:30,580 --> 00:16:36,280
topic on yes we were running into the

383
00:16:33,700 --> 00:16:38,830
same kinds of well I can see the

384
00:16:36,279 --> 00:16:40,480
similarities and even when i'm back in

385
00:16:38,830 --> 00:16:42,570

australia listening to comment or

386

00:16:40,480 --> 00:16:45,039

reading the newspapers or whatever it is

387

00:16:42,570 --> 00:16:47,770

so much of the time we'll have these

388

00:16:45,039 --> 00:16:49,299

outspoken people who who are like the

389

00:16:47,769 --> 00:16:50,649

creationists running around saying that

390

00:16:49,299 --> 00:16:53,589

this is all a scare it's all a

391

00:16:50,649 --> 00:16:55,209

conspiracy who frankly don't know what

392

00:16:53,590 --> 00:16:59,080

they're talking about now I must admit

393

00:16:55,210 --> 00:17:00,519

when it comes to even even more than a

394

00:16:59,080 --> 00:17:01,600

shallow look at something like climate

395

00:17:00,519 --> 00:17:05,680

change I don't know what I'm talking

396

00:17:01,600 --> 00:17:08,079

about so it's amazing other people think

397

00:17:05,680 --> 00:17:10,480

they're suddenly experts and the

398

00:17:08,079 --> 00:17:16,799

consensus of scientific opinion is wrong

399

00:17:10,480 --> 00:17:18,849

you know yeah you know it's funny well

400
00:17:16,799 --> 00:17:21,730
what we learned in dealing with

401
00:17:18,849 --> 00:17:24,969
evolution for so many decades is that

402
00:17:21,730 --> 00:17:27,190
it's really not about the science it's

403
00:17:24,970 --> 00:17:30,430
about the motivation that people have

404
00:17:27,190 --> 00:17:33,910
for accepting or rejecting certain

405
00:17:30,430 --> 00:17:35,230
authorities know you and I know probably

406
00:17:33,910 --> 00:17:38,950
a lot of the people listening to this

407
00:17:35,230 --> 00:17:42,160
show know that the consensus view of the

408
00:17:38,950 --> 00:17:43,779
vast vast majority of scientists all

409
00:17:42,160 --> 00:17:46,180
over their world not just in the United

410
00:17:43,779 --> 00:17:48,609
States is that living things have common

411
00:17:46,180 --> 00:17:52,680
ancestors the universe is very old the

412
00:17:48,609 --> 00:17:54,879
planet is very old billions of years and

413
00:17:52,680 --> 00:18:00,820
evolution in other words has taken place

414
00:17:54,880 --> 00:18:03,010
yeah and they vast a percentage of

415
00:18:00,819 --> 00:18:08,200
scientists particularly those who do

416
00:18:03,009 --> 00:18:11,589
research in climate science are in

417
00:18:08,200 --> 00:18:13,750
agreement that the planet is definitely

418
00:18:11,589 --> 00:18:16,569
getting warm

419
00:18:13,750 --> 00:18:19,289
warmer the rate of change has increased

420
00:18:16,569 --> 00:18:23,439
precipitously in the last 50 years and

421
00:18:19,289 --> 00:18:27,519
that human activity especially in the

422
00:18:23,440 --> 00:18:29,230
release of warming gases has a great

423
00:18:27,519 --> 00:18:32,529
deal to do especially with the rate of

424
00:18:29,230 --> 00:18:34,360
change that's taking place now and this

425
00:18:32,529 --> 00:18:38,319
is something that really is not being

426
00:18:34,359 --> 00:18:42,339
debated mooring scientists but if you

427
00:18:38,319 --> 00:18:46,089
have certain ideological beliefs in the

428

00:18:42,339 --> 00:18:48,970
case of evolution the special creation

429
00:18:46,089 --> 00:18:51,730
is the major ideological belief that's

430
00:18:48,970 --> 00:18:54,069
you know keeps people from accepting the

431
00:18:51,730 --> 00:18:56,319
science you're going to look at the

432
00:18:54,069 --> 00:18:59,319
creation science experts right the

433
00:18:56,319 --> 00:19:02,169
people who agree are you in other words

434
00:18:59,319 --> 00:19:08,230
exactly and and they present arguments

435
00:19:02,170 --> 00:19:11,470
that sound scientific they may be based

436
00:19:08,230 --> 00:19:13,799
in science the arguments of creation

437
00:19:11,470 --> 00:19:16,299
science proponents have been examined by

438
00:19:13,799 --> 00:19:18,220
mainstream scientists have been shown

439
00:19:16,299 --> 00:19:20,409
over and over and over to be false and

440
00:19:18,220 --> 00:19:23,980
to be not supported by evidence and

441
00:19:20,410 --> 00:19:26,650
should not be accepted but there is this

442
00:19:23,980 --> 00:19:29,319

tendency to to accept these views

443

00:19:26,650 --> 00:19:31,200
because they don't contradict the

444

00:19:29,319 --> 00:19:33,730
ideological position that that

445

00:19:31,200 --> 00:19:35,620
conservative Christians hold now in the

446

00:19:33,730 --> 00:19:37,980
case of climate science the pattern is

447

00:19:35,619 --> 00:19:40,599
the same the details are different no

448

00:19:37,980 --> 00:19:43,289
there are ideological reasons for

449

00:19:40,599 --> 00:19:48,039
rejecting anthropogenic climate change

450

00:19:43,289 --> 00:19:49,960
in the United States these are political

451

00:19:48,039 --> 00:19:54,960
ideological views or economic

452

00:19:49,960 --> 00:20:01,059
ideological views views that American

453

00:19:54,960 --> 00:20:03,819
independence or security are being

454

00:20:01,059 --> 00:20:06,639
threatened individual freedoms are being

455

00:20:03,819 --> 00:20:09,480
threatened if these people who claim

456

00:20:06,640 --> 00:20:12,880
anthropogenic climate change is correct

457
00:20:09,480 --> 00:20:14,769
are correct that we'll have to you know

458
00:20:12,880 --> 00:20:16,570
we can't drive our big cars we all have

459
00:20:14,769 --> 00:20:19,119
to turn to priuses and change our light

460
00:20:16,569 --> 00:20:20,619
bulbs and we're risking the security of

461
00:20:19,119 --> 00:20:22,419
our country because we're not using

462
00:20:20,619 --> 00:20:23,079
fossil fuels for the army or whatever

463
00:20:22,420 --> 00:20:24,909
you know I mean

464
00:20:23,079 --> 00:20:27,398
they're these feelings really are very

465
00:20:24,909 --> 00:20:29,500
very strong yeah or there is a feeling

466
00:20:27,398 --> 00:20:34,678
from an economic ideological standpoint

467
00:20:29,500 --> 00:20:37,119
often expressed by libertarians that

468
00:20:34,679 --> 00:20:40,778
anthropogenic climate change is really

469
00:20:37,119 --> 00:20:44,079
an attack upon the capitalist system the

470
00:20:40,778 --> 00:20:49,329
end that constraint should not be placed

471
00:20:44,079 --> 00:20:50,798
upon the industries that produce carbon

472
00:20:49,329 --> 00:20:52,960
there the coal and gas and oil

473
00:20:50,798 --> 00:20:54,359
industries no constraint should be

474
00:20:52,960 --> 00:20:56,200
placed upon them because that is

475
00:20:54,359 --> 00:20:57,788
socialistic instead of being

476
00:20:56,200 --> 00:20:59,350
capitalistic and the free market will

477
00:20:57,788 --> 00:21:01,690
solve all problems there these

478
00:20:59,349 --> 00:21:03,308
ideological views that really do shape

479
00:21:01,690 --> 00:21:05,830
what science you're going to pay

480
00:21:03,308 --> 00:21:09,038
attention to so when somebody who has

481
00:21:05,829 --> 00:21:12,069
that kind of ideology hears from a

482
00:21:09,038 --> 00:21:14,609
climate science denier that here's the

483
00:21:12,069 --> 00:21:17,470
science that shows that the planet

484
00:21:14,609 --> 00:21:19,329
either is not getting warmer which is

485

00:21:17,470 --> 00:21:21,909
harder and harder to support view of the

486
00:21:19,329 --> 00:21:24,879
evidence is so strong but minimally that

487
00:21:21,909 --> 00:21:27,100
it's not people's fault if the planet is

488
00:21:24,880 --> 00:21:29,830
getting warmer it's auto some natural

489
00:21:27,099 --> 00:21:32,829
cycle and unstoppable solar cycles a

490
00:21:29,829 --> 00:21:34,359
very famous video oh of course we've

491
00:21:32,829 --> 00:21:35,798
heard the one it's not in fact getting

492
00:21:34,359 --> 00:21:38,949
warmer we're just about to you for an

493
00:21:35,798 --> 00:21:41,230
ice age I hear that quite a bit well

494
00:21:38,950 --> 00:21:44,139
they're not paying or my favorite which

495
00:21:41,230 --> 00:21:47,860
is the that 1990 it was the hottest year

496
00:21:44,138 --> 00:21:50,888
in the last 50 years so therefore it's

497
00:21:47,859 --> 00:21:53,109
not getting warmer and of course that's

498
00:21:50,888 --> 00:21:55,148
just you know that that is the most

499
00:21:53,109 --> 00:21:57,158

egregious cherry-picking of data and

500

00:21:55,148 --> 00:21:59,589
possibly tues no no no the most

501

00:21:57,159 --> 00:22:01,899
egregious is when when we have a cold

502

00:21:59,589 --> 00:22:03,428
day in Sydney oh yeah but they say hi

503

00:22:01,898 --> 00:22:05,339
all these people who say well it's

504

00:22:03,429 --> 00:22:08,620
getting hotter it's freezing outside

505

00:22:05,339 --> 00:22:12,668
well was it 2009 whatever when when

506

00:22:08,619 --> 00:22:15,418
there was by ice no in Washington DC see

507

00:22:12,669 --> 00:22:18,130
ya what do you mean global warming

508

00:22:15,419 --> 00:22:21,130
sweetie you're confusing weather with

509

00:22:18,130 --> 00:22:26,649
climate they haven't had the same is

510

00:22:21,130 --> 00:22:30,039
great a little little clip on YouTube

511

00:22:26,648 --> 00:22:33,668
that was made by some Swedes I sometime

512

00:22:30,038 --> 00:22:35,230
use it in my talks and it's just is this

513

00:22:33,669 --> 00:22:35,600
great little illustration of the

514
00:22:35,230 --> 00:22:37,788
different

515
00:22:35,599 --> 00:22:39,918
between weather and climate and what

516
00:22:37,788 --> 00:22:42,798
you're seeing is this guy this little

517
00:22:39,919 --> 00:22:45,320
cartoon figure of a man walking a dog on

518
00:22:42,798 --> 00:22:48,400
a leash and he's sort of plotting along

519
00:22:45,319 --> 00:22:50,779
and he started walking you know like

520
00:22:48,400 --> 00:22:52,519
diagonally across the screen that you

521
00:22:50,779 --> 00:22:54,649
are observing here at this little

522
00:22:52,519 --> 00:22:56,119
cartoon figure and the dog is doing the

523
00:22:54,650 --> 00:22:58,788
dog thing the dog is rendered to the

524
00:22:56,119 --> 00:23:01,069
left and to the right aneese is going up

525
00:22:58,788 --> 00:23:03,558
and down and zipping back and forth on

526
00:23:01,069 --> 00:23:05,808
the leash meanwhile the guy holding the

527
00:23:03,558 --> 00:23:08,990
leash the the owner of the dog is just

528
00:23:05,808 --> 00:23:12,470
plotting a straight line yeah and then

529
00:23:08,990 --> 00:23:16,159
the the camera so to speak on this

530
00:23:12,470 --> 00:23:20,029
little vignette pulls back and you see

531
00:23:16,159 --> 00:23:22,940
that the dog is is well I should say

532
00:23:20,029 --> 00:23:25,609
properly speaking the man is walking in

533
00:23:22,940 --> 00:23:30,860
a diagonal line so to speak across an XY

534
00:23:25,609 --> 00:23:34,519
axis graph the dog is crossing the line

535
00:23:30,859 --> 00:23:36,199
up and down Aziz on as leash the dog is

536
00:23:34,519 --> 00:23:38,808
the climate is the dog is the weather

537
00:23:36,200 --> 00:23:41,450
the weight which goes up and down but

538
00:23:38,808 --> 00:23:43,940
the climate is really controlling where

539
00:23:41,450 --> 00:23:48,558
that dog is going to be and so that it's

540
00:23:43,940 --> 00:23:50,538
this is very lovely little hmm I like

541
00:23:48,558 --> 00:23:53,089
that oh yeah yeah I'll send you a link

542

00:23:50,538 --> 00:23:54,529
to it and I was all included on the show

543
00:23:53,089 --> 00:23:56,000
notes for this episode that sounds like

544
00:23:54,529 --> 00:24:00,288
oh really it's actually I think would

545
00:23:56,000 --> 00:24:02,119
you remember what it's called the

546
00:24:00,288 --> 00:24:04,879
mammoth dog climate yeah you probably

547
00:24:02,119 --> 00:24:08,229
find it that way and but I'm pretty sure

548
00:24:04,880 --> 00:24:10,580
it's the Swedes who did it guy who I

549
00:24:08,230 --> 00:24:12,319
have it on my computer and I can tell

550
00:24:10,579 --> 00:24:14,418
you exactly where it is on my dog

551
00:24:12,319 --> 00:24:16,069
wallpaper but I can tell you the name

552
00:24:14,419 --> 00:24:17,690
I'll let the listeners know before this

553
00:24:16,069 --> 00:24:19,428
search this show is out don't worry

554
00:24:17,690 --> 00:24:21,529
about yeah it's great fun what the one

555
00:24:19,429 --> 00:24:23,330
is a post editing interviews we it's

556
00:24:21,529 --> 00:24:25,190

just marvelous we can fit all this sort

557

00:24:23,329 --> 00:24:29,178
of stuff it in post fix it in post as

558

00:24:25,190 --> 00:24:31,220
they said they said at the creation so

559

00:24:29,179 --> 00:24:33,080
yeah it's interesting that that you can

560

00:24:31,220 --> 00:24:34,519
use this wealth of information

561

00:24:33,079 --> 00:24:37,129
especially when it comes to the

562

00:24:34,519 --> 00:24:38,538
arguments both things really what you've

563

00:24:37,130 --> 00:24:41,360
learned from the creationism and

564

00:24:38,538 --> 00:24:43,940
evolution story I think well the reason

565

00:24:41,359 --> 00:24:46,209
we took on this whole new subject area

566

00:24:43,940 --> 00:24:48,070
as you say

567

00:24:46,210 --> 00:24:50,529
this is not a subject area that you are

568

00:24:48,069 --> 00:24:53,109
I are intimately acquainted or are you

569

00:24:50,529 --> 00:24:55,990
to some degree what we have done is said

570

00:24:53,109 --> 00:24:57,909
okay we're going to take a look at the

571
00:24:55,990 --> 00:25:00,400
consensus of the scientific community of

572
00:24:57,910 --> 00:25:03,190
people who have done the hard work of

573
00:25:00,400 --> 00:25:06,340
figuring out how the world works in this

574
00:25:03,190 --> 00:25:09,700
particular context and you know we're

575
00:25:06,339 --> 00:25:13,139
going to we're going to look at at the

576
00:25:09,700 --> 00:25:16,600
outcome of what we know is this very

577
00:25:13,140 --> 00:25:19,830
iterative process of of progress and

578
00:25:16,599 --> 00:25:22,689
critique and progress and critique and

579
00:25:19,829 --> 00:25:23,980
once there is a consensus and we're

580
00:25:22,690 --> 00:25:26,500
going to go along with that consensus

581
00:25:23,980 --> 00:25:32,049
even though we are not researchers in

582
00:25:26,500 --> 00:25:34,299
this field yeah yeah and I I can I can

583
00:25:32,049 --> 00:25:36,809
have confidence in that process because

584
00:25:34,299 --> 00:25:39,700
I am very familiar with how that process

585
00:25:36,809 --> 00:25:42,369
operated when it comes to evolution and

586
00:25:39,700 --> 00:25:44,380
when I was actually a real genuine

587
00:25:42,369 --> 00:25:48,279
scientist as opposed to playing one on

588
00:25:44,380 --> 00:25:49,870
television I can yeah I knew I I was

589
00:25:48,279 --> 00:25:52,779
contributing to that process I mean I

590
00:25:49,869 --> 00:25:55,479
know how science works and I know how it

591
00:25:52,779 --> 00:25:57,609
came out the case of evolution living

592
00:25:55,480 --> 00:26:01,089
things of common ancestors Pope this is

593
00:25:57,609 --> 00:26:04,089
a this is it and I see the same sort of

594
00:26:01,089 --> 00:26:10,599
consensus having arrived at within the

595
00:26:04,089 --> 00:26:13,629
climate science community as well so it

596
00:26:10,599 --> 00:26:15,519
really is it really is not just

597
00:26:13,630 --> 00:26:17,410
accepting the dogma shall we say of

598
00:26:15,519 --> 00:26:20,740
science it's actually understanding how

599

00:26:17,410 --> 00:26:23,019
science works and accepting a consensus

600
00:26:20,740 --> 00:26:25,569
view which might change yeah yeah this

601
00:26:23,019 --> 00:26:28,119
is okay this is very hard for a lot of

602
00:26:25,569 --> 00:26:30,519
people to cochlear to grasp especially a

603
00:26:28,119 --> 00:26:32,829
lot of the people I deal with in the in

604
00:26:30,519 --> 00:26:34,569
the new age supernatural paranormal

605
00:26:32,829 --> 00:26:36,549
realms shall I say psychics and

606
00:26:34,569 --> 00:26:38,829
clairvoyants in this sort of ilk who

607
00:26:36,549 --> 00:26:41,919
will gladly use scientific sounding

608
00:26:38,829 --> 00:26:44,649
words and phrases but this concept of

609
00:26:41,920 --> 00:26:46,420
the scientific consensus that's what you

610
00:26:44,650 --> 00:26:49,660
support because people who research

611
00:26:46,420 --> 00:26:53,558
should this is their conclusion but you

612
00:26:49,660 --> 00:26:56,269
you also are prepared to

613
00:26:53,558 --> 00:26:58,368

come and go with the tight as it was as

614

00:26:56,269 --> 00:27:00,288

things change in a to a lot of people

615

00:26:58,368 --> 00:27:02,269

that's that's beyond the pale and

616

00:27:00,288 --> 00:27:05,148

another interesting point is a lot of

617

00:27:02,269 --> 00:27:06,999

people will hang on to their beliefs and

618

00:27:05,148 --> 00:27:09,949

that dope about they'll follow XYZ

619

00:27:06,999 --> 00:27:11,239

person who says this because I guess at

620

00:27:09,950 --> 00:27:13,819

times they're seen as the Maverick

621

00:27:11,239 --> 00:27:16,399

here's the one guy who's standing up

622

00:27:13,819 --> 00:27:18,528

against the you know he they laughed at

623

00:27:16,398 --> 00:27:19,699

Galileo I hear that so many times I want

624

00:27:18,528 --> 00:27:21,079

to pull my hair out you know they

625

00:27:19,700 --> 00:27:22,819

laughed at those of the clown they left

626

00:27:21,079 --> 00:27:25,519

it bozo the clown it's called Sagan said

627

00:27:22,819 --> 00:27:29,479

yes that's right being laughed at his

628
00:27:25,519 --> 00:27:31,009
hardly grounds for agencies point but

629
00:27:29,479 --> 00:27:33,619
but it's a wonderful thing for them to

630
00:27:31,009 --> 00:27:36,440
use because they say well he was right

631
00:27:33,618 --> 00:27:38,658
there for this person who they're

632
00:27:36,440 --> 00:27:40,669
laughing at must be right and that's how

633
00:27:38,659 --> 00:27:43,669
the thinking is wired into the culture

634
00:27:40,669 --> 00:27:45,649
though oh yeah I mean we you know we we

635
00:27:43,669 --> 00:27:48,320
share basically sort of Western

636
00:27:45,648 --> 00:27:51,469
industrial culture Australian in the US

637
00:27:48,319 --> 00:27:54,138
and english-speaking and it's it's kind

638
00:27:51,470 --> 00:27:56,239
of wired into our culture we really like

639
00:27:54,138 --> 00:27:58,969
underdogs yeah we really like the

640
00:27:56,239 --> 00:28:00,919
Mavericks we really like the the High

641
00:27:58,970 --> 00:28:03,159
Noon guy who's standing over the crowd

642
00:28:00,919 --> 00:28:07,070
and going his own way and stuff

643
00:28:03,159 --> 00:28:14,479
sometimes when I talk about science as a

644
00:28:07,069 --> 00:28:16,189
way of knowing how I'll express it in a

645
00:28:14,479 --> 00:28:18,590
way that I hope gets across the idea

646
00:28:16,190 --> 00:28:21,048
that some aspects of science are very

647
00:28:18,589 --> 00:28:22,970
stable and don't change like we were

648
00:28:21,048 --> 00:28:26,388
talking about other aspects of of

649
00:28:22,970 --> 00:28:27,889
science are more labile and they do

650
00:28:26,388 --> 00:28:30,678
change and those are the parts that we

651
00:28:27,888 --> 00:28:33,048
you know we're worth good wood with if

652
00:28:30,679 --> 00:28:35,028
you think it's useful to think of

653
00:28:33,048 --> 00:28:37,548
science as a set of concentric circles

654
00:28:35,028 --> 00:28:39,648
yes this is a good model yeah in the

655
00:28:37,548 --> 00:28:41,720
middle is the core ideas of science yeah

656

00:28:39,648 --> 00:28:43,638
the next concentric circle around that

657
00:28:41,720 --> 00:28:46,579
are their frontier ideas of science and

658
00:28:43,638 --> 00:28:48,858
then on the concentric circle around

659
00:28:46,579 --> 00:28:52,148
that is the fringe viewers is the part

660
00:28:48,858 --> 00:28:55,728
where we like to splash with our

661
00:28:52,148 --> 00:28:57,768
paranormal and all the other kind of fun

662
00:28:55,729 --> 00:28:59,720
stuff especially that you do but the

663
00:28:57,769 --> 00:29:02,690
core ideas of science are not likely to

664
00:28:59,720 --> 00:29:04,639
change the big idea that living things

665
00:29:02,690 --> 00:29:06,039
of common ancestors the basic idea of

666
00:29:04,638 --> 00:29:08,769
biological evolution

667
00:29:06,039 --> 00:29:11,109
not going to change the big idea of

668
00:29:08,769 --> 00:29:14,740
continental drift that the planets move

669
00:29:11,109 --> 00:29:16,659
around and the surface of the planet has

670
00:29:14,740 --> 00:29:19,809

changed over time that's not going to

671

00:29:16,660 --> 00:29:21,820

change you in the frontier the the next

672

00:29:19,809 --> 00:29:23,440

concentric circle out the frontier ideas

673

00:29:21,819 --> 00:29:25,869

of science that's where the research is

674

00:29:23,440 --> 00:29:29,650

going on that's where discoveries are

675

00:29:25,869 --> 00:29:32,529

being made and that's where things very

676

00:29:29,650 --> 00:29:35,800

likely will change and can change or be

677

00:29:32,529 --> 00:29:39,029

modified but the nice thing about

678

00:29:35,799 --> 00:29:42,099

science is that very rarely does

679

00:29:39,029 --> 00:29:44,710

everything change you know I used to

680

00:29:42,099 --> 00:29:46,539

just want to smack my physical

681

00:29:44,710 --> 00:29:50,910

anthropology colleagues upside the head

682

00:29:46,539 --> 00:29:54,220

when one of them would start a talk or

683

00:29:50,910 --> 00:29:57,009

worse yet a class everything in my field

684

00:29:54,220 --> 00:30:01,720

has changed since last semester no it

685
00:29:57,009 --> 00:30:03,700
hasn't oh really what you mean females

686
00:30:01,720 --> 00:30:07,600
don't have whiter sciatic matches than

687
00:30:03,700 --> 00:30:09,340
men who knew well I don't mean that well

688
00:30:07,599 --> 00:30:12,699
of course not there's most of the stuff

689
00:30:09,339 --> 00:30:15,220
doesn't change and what we will change

690
00:30:12,700 --> 00:30:17,830
the details and we change sometimes you

691
00:30:15,220 --> 00:30:20,980
change very tiny details but the core

692
00:30:17,829 --> 00:30:23,859
ideas yeah change yeah yeah and even and

693
00:30:20,980 --> 00:30:26,049
a lot of those frontier ideas will go

694
00:30:23,859 --> 00:30:28,000
into the core and some frontier ideas

695
00:30:26,049 --> 00:30:31,990
are going to be dropped because they

696
00:30:28,000 --> 00:30:35,470
don't work but that the planet is

697
00:30:31,990 --> 00:30:37,480
getting warm is an observation really

698
00:30:35,470 --> 00:30:39,370
it's not even a core idea this is this

699

00:30:37,480 --> 00:30:44,200
is just a flat-out observation this is a

700

00:30:39,369 --> 00:30:47,319
you know an observation is a fact yo how

701

00:30:44,200 --> 00:30:50,049
we explain that warming the idea that

702

00:30:47,319 --> 00:30:51,669
there are certain gases that because of

703

00:30:50,049 --> 00:30:55,659
their chemistry because of the physics

704

00:30:51,670 --> 00:30:58,630
involved act to warm the planet things

705

00:30:55,660 --> 00:31:00,790
like co2 things like methane the the

706

00:30:58,630 --> 00:31:02,920
important warming gases which are caught

707

00:31:00,789 --> 00:31:04,809
in our atmosphere and which are helping

708

00:31:02,920 --> 00:31:07,660
to insulate the planet and make it

709

00:31:04,809 --> 00:31:11,200
toastier that's those are basic core

710

00:31:07,660 --> 00:31:13,240
ideas and so our explanations for the

711

00:31:11,200 --> 00:31:17,350
current warming of this planet which is

712

00:31:13,240 --> 00:31:19,259
an observation our core ideas which is

713

00:31:17,349 --> 00:31:20,969
which is why

714
00:31:19,259 --> 00:31:23,549
there is this very strong consensus

715
00:31:20,970 --> 00:31:26,009
about anthropogenic global warming yeah

716
00:31:23,549 --> 00:31:28,919
well I don't know what you're gonna be

717
00:31:26,009 --> 00:31:31,379
taking on next Jeannie retirement

718
00:31:28,920 --> 00:31:35,100
retirement and never sure you're not

719
00:31:31,380 --> 00:31:37,050
truly truly yeah no yeah I am I have

720
00:31:35,099 --> 00:31:40,349
announced my retirement but by the end

721
00:31:37,049 --> 00:31:42,889
of the year one well good grief hope you

722
00:31:40,349 --> 00:31:46,469
well let me tell you right here and now

723
00:31:42,890 --> 00:31:49,560
gotcha well you know the time has come

724
00:31:46,470 --> 00:31:52,289
curtain of the time has come NCSE is at

725
00:31:49,559 --> 00:31:54,710
this very exciting time in its evolution

726
00:31:52,289 --> 00:31:57,240
shall we sit in its trajectory it's

727
00:31:54,710 --> 00:31:59,370

ontogeny if you will we've got this

728

00:31:57,240 --> 00:32:02,309

wonderful new exciting program that

729

00:31:59,369 --> 00:32:05,369

climate change program is starting we're

730

00:32:02,309 --> 00:32:06,929

where we've grown so much from when we

731

00:32:05,369 --> 00:32:09,989

just started out and it was just me

732

00:32:06,930 --> 00:32:14,759

right we've gone from 1 to 15 2 and only

733

00:32:09,990 --> 00:32:17,069

26 years but it's time for new ideas it

734

00:32:14,759 --> 00:32:18,990

really is it's time for somebody new to

735

00:32:17,069 --> 00:32:21,210

come in and really take this

736

00:32:18,990 --> 00:32:24,450

organization in new and creative

737

00:32:21,210 --> 00:32:28,620

directions you know it is the nature of

738

00:32:24,450 --> 00:32:31,980

nonprofits to thrive when you have new

739

00:32:28,619 --> 00:32:33,359

blood coming in and it's time oh well

740

00:32:31,980 --> 00:32:35,039

what do you think you'll have more time

741

00:32:33,359 --> 00:32:37,799

to do the same sort of stuff will you

742
00:32:35,039 --> 00:32:38,970
can be doing different stuff well I

743
00:32:37,799 --> 00:32:42,690
won't be waking up at night worrying

744
00:32:38,970 --> 00:32:45,720
about money well that will be nice

745
00:32:42,690 --> 00:32:47,100
that'll be real nice and see I'll get

746
00:32:45,720 --> 00:32:49,440
that dog that I was talking you'll get

747
00:32:47,099 --> 00:32:51,199
that dog but I don't suppose this is

748
00:32:49,440 --> 00:32:54,710
going to mean that end things like

749
00:32:51,200 --> 00:32:57,180
lecturing and visiting actually I have

750
00:32:54,710 --> 00:32:59,640
speaking engagements lined up through I

751
00:32:57,180 --> 00:33:03,480
think next me you go yeah i'd be

752
00:32:59,640 --> 00:33:05,280
surprised we're though nobody's actually

753
00:33:03,480 --> 00:33:07,319
called up and said oh I'm sorry we want

754
00:33:05,279 --> 00:33:09,420
to cancel yeah you're the doctor yeah

755
00:33:07,319 --> 00:33:13,169
I'll still be good for a few for a few

756
00:33:09,420 --> 00:33:15,090
more months I won't have forgotten

757
00:33:13,170 --> 00:33:17,400
everything I know but now you're just

758
00:33:15,089 --> 00:33:19,829
about to go to the Grand Canyon again

759
00:33:17,400 --> 00:33:22,230
yeah I am it's very exciting see now

760
00:33:19,829 --> 00:33:25,500
what I wanted to do is on the

761
00:33:22,230 --> 00:33:27,690
description of the I mean you know we

762
00:33:25,500 --> 00:33:29,759
have advertised for a new executive

763
00:33:27,690 --> 00:33:31,279
director and the board is in the process

764
00:33:29,759 --> 00:33:33,379
of reviewing

765
00:33:31,279 --> 00:33:36,649
resumes that have been submitted and

766
00:33:33,380 --> 00:33:38,450
we'll be making decisions about who to

767
00:33:36,650 --> 00:33:42,190
interview and so forth in the very near

768
00:33:38,450 --> 00:33:46,000
future but I wanted to build into the

769
00:33:42,190 --> 00:33:50,140
the job description must hate

770

00:33:46,000 --> 00:33:52,640
unreasonably hot weather in cold water

771
00:33:50,140 --> 00:33:56,030
well because that's what the Grand

772
00:33:52,640 --> 00:33:56,900
Canyon courtesy of course yes but I

773
00:33:56,029 --> 00:33:59,269
don't think that's going to happen

774
00:33:56,900 --> 00:34:01,790
that's one of the real great perks of

775
00:33:59,269 --> 00:34:03,259
this job you see is is being able to go

776
00:34:01,789 --> 00:34:05,690
to Grand Canyon every year it's a

777
00:34:03,259 --> 00:34:07,879
fabulous experience so we will be

778
00:34:05,690 --> 00:34:10,880
compact have our dates for next year

779
00:34:07,880 --> 00:34:13,880
already we have booked our our very

780
00:34:10,880 --> 00:34:16,369
favorite outfitter mochi mac to go down

781
00:34:13,880 --> 00:34:18,289
Grand Canyon again so any of your

782
00:34:16,369 --> 00:34:20,359
listeners who want to go take our

783
00:34:18,289 --> 00:34:22,940
creation and evolution tour of Grand

784
00:34:20,360 --> 00:34:25,130

Canyon which you really must do someone

785

00:34:22,940 --> 00:34:29,809

wages you really have to open be such

786

00:34:25,130 --> 00:34:32,269

fun and I will I I can't guarantee that

787

00:34:29,809 --> 00:34:34,279

I will be hosting this trip and yours in

788

00:34:32,269 --> 00:34:38,360

the future unless of course we get that

789

00:34:34,280 --> 00:34:40,370

ideal candidate who hates water but I

790

00:34:38,360 --> 00:34:42,620

might I might just be tagging along as

791

00:34:40,369 --> 00:34:44,239

you know the thing about the canyon that

792

00:34:42,619 --> 00:34:47,089

gets in your blood yeah it's such a

793

00:34:44,239 --> 00:34:49,489

fabulous I say I'm very excited about

794

00:34:47,090 --> 00:34:50,929

have you get on that one that new think

795

00:34:49,489 --> 00:34:52,519

i saw on television where you can walk

796

00:34:50,929 --> 00:34:54,980

out over the Grand Canyon is at a

797

00:34:52,519 --> 00:34:58,130

different place that is on one of the

798

00:34:54,980 --> 00:35:02,030

side canyons and right somebody one of

799

00:34:58,130 --> 00:35:08,210

the Indian reservations there and no i

800

00:35:02,030 --> 00:35:11,330

haven't I I you can see it from from we

801

00:35:08,210 --> 00:35:13,309

sail past it all really happened if you

802

00:35:11,329 --> 00:35:16,460

look up you can see the particular

803

00:35:13,309 --> 00:35:19,099

Canyon and there are little the little

804

00:35:16,460 --> 00:35:22,970

uh it's like a horseshoe comes out the

805

00:35:19,099 --> 00:35:27,920

glass right about it you can't be voted

806

00:35:22,969 --> 00:35:30,230

yes to it to take that but it's I'm just

807

00:35:27,920 --> 00:35:33,320

I'm probably too cheap to do it i think

808

00:35:30,230 --> 00:35:34,940

it's 25 bucks or something and i can

809

00:35:33,320 --> 00:35:37,640

look down in the canyon without actually

810

00:35:34,940 --> 00:35:39,039

i just go there i guess uh well and

811

00:35:37,639 --> 00:35:41,599

besides the fun part is looking up

812

00:35:39,039 --> 00:35:42,190

looking up but from the what from the

813
00:35:41,599 --> 00:35:44,980
river

814
00:35:42,190 --> 00:35:46,420
I mean people go to grand canyon and of

815
00:35:44,980 --> 00:35:48,639
course you go to the edge and you look

816
00:35:46,420 --> 00:35:50,200
over and there's this oh my god kind of

817
00:35:48,639 --> 00:35:52,539
moment because you appreciate the

818
00:35:50,199 --> 00:35:55,149
fastness and the beauty and the just the

819
00:35:52,539 --> 00:36:00,099
sweep and the spectacle of this fabulous

820
00:35:55,150 --> 00:36:02,829
feature but it's very different being on

821
00:36:00,099 --> 00:36:05,829
the river and looking up you you get a

822
00:36:02,829 --> 00:36:10,660
totally different perspective of the

823
00:36:05,829 --> 00:36:13,240
canyon the majesty and the sweep and the

824
00:36:10,659 --> 00:36:16,179
feeling of age is there but you

825
00:36:13,239 --> 00:36:18,489
experience it differently and I you know

826
00:36:16,179 --> 00:36:20,139
it's just even if you've looked at Grand

827

00:36:18,489 --> 00:36:22,358
Canyon from the top I would encourage

828
00:36:20,139 --> 00:36:24,489
everyone to look at it from the bottom

829
00:36:22,358 --> 00:36:27,130
up it's a pretty extraordinary

830
00:36:24,489 --> 00:36:28,419
experience now just just something's

831
00:36:27,130 --> 00:36:30,130
just occurred to me something I caught

832
00:36:28,420 --> 00:36:31,750
up with a little while ago on youtube in

833
00:36:30,130 --> 00:36:34,990
fact it was a show called conspiracy

834
00:36:31,750 --> 00:36:38,380
theory road trip have you seen that yes

835
00:36:34,989 --> 00:36:44,199
yes and they did they did a show on

836
00:36:38,380 --> 00:36:46,480
Grand Canyon yes which they had a they

837
00:36:44,199 --> 00:36:48,338
actually had asked me to do that and I

838
00:36:46,480 --> 00:36:51,358
just couldn't bring myself to do it

839
00:36:48,338 --> 00:36:56,650
because I feel very strongly about not

840
00:36:51,358 --> 00:36:58,900
debating creation and you know this is

841
00:36:56,650 --> 00:37:01,030

television is television so what they're

842

00:36:58,900 --> 00:37:03,700

going to do is let's you and him fight

843

00:37:01,030 --> 00:37:07,720

yeah they did go to an extent it's it's

844

00:37:03,699 --> 00:37:12,009

the it's the conflict narrative that

845

00:37:07,719 --> 00:37:14,618

they like to present and what I you know

846

00:37:12,010 --> 00:37:17,740

what I suggested to them that what might

847

00:37:14,619 --> 00:37:19,660

be a very interesting program I'm sorry

848

00:37:17,739 --> 00:37:21,219

our your listeners aren't familiar with

849

00:37:19,659 --> 00:37:23,529

what the show is what they did is they

850

00:37:21,219 --> 00:37:25,239

got some conservative Christian students

851

00:37:23,530 --> 00:37:27,670

who were all young earth creationists

852

00:37:25,239 --> 00:37:30,879

and they took them on it to her little

853

00:37:27,670 --> 00:37:33,700

bus yeah and they went to various places

854

00:37:30,880 --> 00:37:36,369

i did also to various scientists and

855

00:37:33,699 --> 00:37:38,259

people young and then I think that

856
00:37:36,369 --> 00:37:41,440
climax was going to grand canyon where

857
00:37:38,260 --> 00:37:43,480
you know it was it done pray through was

858
00:37:41,440 --> 00:37:45,550
that the one who did it oh who was it

859
00:37:43,480 --> 00:37:47,139
i'm trying to remember they got a very

860
00:37:45,550 --> 00:37:49,568
competent scientists to take them

861
00:37:47,139 --> 00:37:51,460
through okok i remember i think it was

862
00:37:49,568 --> 00:37:53,579
done he did it whoever it was did a very

863
00:37:51,460 --> 00:37:56,490
good job i think was done

864
00:37:53,579 --> 00:38:03,029
but you know of course it was here is

865
00:37:56,489 --> 00:38:04,259
the science and if you have your fingers

866
00:38:03,030 --> 00:38:06,630
in your ears you're not going to be

867
00:38:04,260 --> 00:38:09,900
listening to right and so none of these

868
00:38:06,630 --> 00:38:13,950
kids ever really quite absorbed the fact

869
00:38:09,900 --> 00:38:17,090
that they're allegedly scientific views

870
00:38:13,949 --> 00:38:20,669
just don't match up to the data the data

871
00:38:17,090 --> 00:38:23,610
the data clearly refute their view and

872
00:38:20,670 --> 00:38:25,470
it's only if you ignore huge amount of

873
00:38:23,610 --> 00:38:27,840
amounts of data and just cherry-pick the

874
00:38:25,469 --> 00:38:29,909
ones that superficially look like they

875
00:38:27,840 --> 00:38:32,850
support your view that you can you can

876
00:38:29,909 --> 00:38:35,699
hold attitudes like the Grand Canyon

877
00:38:32,849 --> 00:38:39,860
having been formed after Noah's Flood I

878
00:38:35,699 --> 00:38:42,179
mean catastrophic production of the

879
00:38:39,860 --> 00:38:46,440
layers and then the cutting of the

880
00:38:42,179 --> 00:38:49,139
canyon itself and what I suggested to

881
00:38:46,440 --> 00:38:50,970
the to the filmmakers before they filmed

882
00:38:49,139 --> 00:38:54,449
it was it would be much more interesting

883
00:38:50,969 --> 00:38:56,429
to get some Christian Scientists some

884

00:38:54,449 --> 00:38:59,609
scientists who were also Christians but

885
00:38:56,429 --> 00:39:01,379
who accepted evolution so that the

886
00:38:59,610 --> 00:39:04,890
students wouldn't be able to go into

887
00:39:01,380 --> 00:39:07,079
their you there the familiar default oh

888
00:39:04,889 --> 00:39:09,989
well he feels this way cuz he's an

889
00:39:07,079 --> 00:39:12,960
atheist rice yeah because that is their

890
00:39:09,989 --> 00:39:15,059
ultimate defense yes yeah and whereas if

891
00:39:12,960 --> 00:39:17,070
you had and you know I gave him some

892
00:39:15,059 --> 00:39:21,599
suggestions of some scientists who would

893
00:39:17,070 --> 00:39:25,050
be good at explaining why why the

894
00:39:21,599 --> 00:39:27,889
science refuted creation science but who

895
00:39:25,050 --> 00:39:30,750
also would kind of have that extra

896
00:39:27,889 --> 00:39:32,670
component of not being dismissible

897
00:39:30,750 --> 00:39:34,739
because they come from the same faith

898
00:39:32,670 --> 00:39:36,360

tradition as the students I mean you'd

899

00:39:34,739 --> 00:39:38,159

have to get evangelical scientists but I

900

00:39:36,360 --> 00:39:40,380

gave him some names really but at any

901

00:39:38,159 --> 00:39:42,599

rate mmm had any rate they decided to do

902

00:39:40,380 --> 00:39:44,970

you know do it the way they did it so

903

00:39:42,599 --> 00:39:47,000

there you have it but it was it's it's

904

00:39:44,969 --> 00:39:49,589

an interesting program because these

905

00:39:47,000 --> 00:39:53,340

conservative Christian kids were were

906

00:39:49,590 --> 00:39:57,120

very likable and they were you know they

907

00:39:53,340 --> 00:39:58,870

were kids and so they're they're

908

00:39:57,119 --> 00:40:02,380

searching for meaning in life and

909

00:39:58,869 --> 00:40:04,859

you kind of you you you can't help but

910

00:40:02,380 --> 00:40:08,019

be sympathetic to them do you get um

911

00:40:04,860 --> 00:40:11,050

requested often by documentaries and TV

912

00:40:08,019 --> 00:40:13,469

yeah yeah yeah it's not every I mean

913
00:40:11,050 --> 00:40:16,420
there's only so many that are done there

914
00:40:13,469 --> 00:40:19,119
when there's some sort of a public event

915
00:40:16,420 --> 00:40:21,340
like the Dover trial yes that kind of

916
00:40:19,119 --> 00:40:23,170
generated a flurry of your documentary

917
00:40:21,340 --> 00:40:25,210
no aid types of things all right we're

918
00:40:23,170 --> 00:40:28,510
actually fairly careful we will advise

919
00:40:25,210 --> 00:40:31,570
anybody yes and try to steer them right

920
00:40:28,510 --> 00:40:33,730
so to speak so that they mean it has to

921
00:40:31,570 --> 00:40:35,920
be an entertaining show it's television

922
00:40:33,730 --> 00:40:38,559
right if we understand I understand that

923
00:40:35,920 --> 00:40:40,269
very well I guess yes it's not a science

924
00:40:38,559 --> 00:40:42,759
lecture it's got to be something fun

925
00:40:40,269 --> 00:40:45,489
it's got to be something grabbing but if

926
00:40:42,760 --> 00:40:47,310
you can do that but still not distort

927
00:40:45,489 --> 00:40:50,049
the science I consider it a victory and

928
00:40:47,309 --> 00:40:51,639
that's what we try to do we try to we

929
00:40:50,050 --> 00:40:53,890
you know while appreciating the

930
00:40:51,639 --> 00:40:55,719
importance of being entertaining we try

931
00:40:53,889 --> 00:40:58,210
to steer them in ways that would make

932
00:40:55,719 --> 00:40:59,559
this do yeah I mean it doesn't hurt if

933
00:40:58,210 --> 00:41:01,389
you teach people a little bit of science

934
00:40:59,559 --> 00:41:03,460
on the side of course not even if your

935
00:41:01,389 --> 00:41:05,349
goal is to entertain you were on penn &

936
00:41:03,460 --> 00:41:07,470
teller's I went you were I

937
00:41:05,349 --> 00:41:11,079
remember years ago yes as well now as

938
00:41:07,469 --> 00:41:12,789
soon as it yes forever ago yeah I but in

939
00:41:11,079 --> 00:41:14,469
one respect it just seems like the other

940
00:41:12,789 --> 00:41:16,269
days it's shown a this show came out

941

00:41:14,469 --> 00:41:19,299
nothing oh wow what's this but yes it's

942
00:41:16,269 --> 00:41:21,340
a years ago now yeah that's scary is it

943
00:41:19,300 --> 00:41:22,750
still on I do not have to do so I don't

944
00:41:21,340 --> 00:41:24,220
think I've done a new episode for a long

945
00:41:22,750 --> 00:41:27,820
time yeah they did quite a number of

946
00:41:24,219 --> 00:41:29,769
series but they have yes I thought after

947
00:41:27,820 --> 00:41:32,620
we tree watch it now isn't that scary

948
00:41:29,769 --> 00:41:34,210
well I remember they when we hooked

949
00:41:32,619 --> 00:41:36,369
quite a bit in the background on that

950
00:41:34,210 --> 00:41:38,050
yeah and that this was I'm pretty sure

951
00:41:36,369 --> 00:41:41,380
the first season I'm pretty sure you're

952
00:41:38,050 --> 00:41:43,930
right yeah because when we were called

953
00:41:41,380 --> 00:41:47,260
by the producers and they said they

954
00:41:43,929 --> 00:41:49,089
couldn't tell me who it was or who the

955
00:41:47,260 --> 00:41:50,440

hosts were this was all very secret get

956

00:41:49,090 --> 00:41:55,120

really good released yet this is all

957

00:41:50,440 --> 00:41:56,769

very hush-hush and then but you know we

958

00:41:55,119 --> 00:41:58,509

gave them advice of who to interview on

959

00:41:56,769 --> 00:42:00,400

the creationist side and you know where

960

00:41:58,510 --> 00:42:01,780

to find people and would interview on

961

00:42:00,400 --> 00:42:06,099

the evolution side and we kind of help

962

00:42:01,780 --> 00:42:09,070

them structure the the show and then I

963

00:42:06,099 --> 00:42:10,960

got they did go down to the Institute

964

00:42:09,070 --> 00:42:12,430

for Creation Research and the interview

965

00:42:10,960 --> 00:42:14,079

ition morris and you know the usual

966

00:42:12,429 --> 00:42:18,879

crowd down there I think was probably

967

00:42:14,079 --> 00:42:22,029

John Morris and they sent me the script

968

00:42:18,880 --> 00:42:24,280

and or maybe it was before they

969

00:42:22,030 --> 00:42:25,690

interviewed it was before they

970
00:42:24,280 --> 00:42:26,950
interviewed and they wanted me to review

971
00:42:25,690 --> 00:42:28,450
the script to see if they were going to

972
00:42:26,949 --> 00:42:30,338
be asking the right questions which is

973
00:42:28,449 --> 00:42:32,169
exactly what we want people to do

974
00:42:30,338 --> 00:42:33,820
because we can help them yeah we can

975
00:42:32,170 --> 00:42:38,079
help them ask better questions that's a

976
00:42:33,820 --> 00:42:40,780
better show yeah and at the very top it

977
00:42:38,079 --> 00:42:43,179
said penn & teller and I thought ha how

978
00:42:40,780 --> 00:42:44,830
about that and until her must be doing a

979
00:42:43,179 --> 00:42:46,598
TV show but that's all I knew about it

980
00:42:44,829 --> 00:42:48,130
yeah and they didn't have the name of

981
00:42:46,599 --> 00:42:49,390
the show or anything like oh there's

982
00:42:48,130 --> 00:42:52,210
something to do with penet oh that

983
00:42:49,389 --> 00:42:54,309
should be fun but of course the people

984
00:42:52,210 --> 00:42:56,409
who you know the people who interviewed

985
00:42:54,309 --> 00:42:59,079
me was we're not done and Teller they

986
00:42:56,409 --> 00:43:02,829
just sort of cut in dead entire boys the

987
00:42:59,079 --> 00:43:04,299
usual stuff yet yeah so um anywhere was

988
00:43:02,829 --> 00:43:08,319
fun it was fun working with those guys

989
00:43:04,300 --> 00:43:11,470
and it what's really fun is when they

990
00:43:08,320 --> 00:43:16,059
listen to you because we really can help

991
00:43:11,469 --> 00:43:17,230
them better show yeah so yeah well

992
00:43:16,059 --> 00:43:18,670
that's that's the advice of course

993
00:43:17,230 --> 00:43:20,409
whether you're here or not Ginny the

994
00:43:18,670 --> 00:43:23,588
National Center for Center for Science

995
00:43:20,409 --> 00:43:27,338
Education is here to help and advise not

996
00:43:23,588 --> 00:43:29,650
only teachers especially but also you're

997
00:43:27,338 --> 00:43:32,259
a resource for the media absolutely and

998

00:43:29,650 --> 00:43:35,559
we will continue to do that you know

999
00:43:32,260 --> 00:43:37,210
when when I announced that I was

1000
00:43:35,559 --> 00:43:41,588
retiring which it was i thinkin may

1001
00:43:37,210 --> 00:43:44,769
actually there was a fair amount of

1002
00:43:41,588 --> 00:43:49,150
breast meeting oh no what a terrible

1003
00:43:44,769 --> 00:43:52,750
thing oh and you know the thing that

1004
00:43:49,150 --> 00:43:56,470
people have to remember is that NCSE has

1005
00:43:52,750 --> 00:43:59,760
never been just Eugenie Scott it's

1006
00:43:56,469 --> 00:44:03,669
always been a very hardworking and very

1007
00:43:59,760 --> 00:44:06,790
competent staff and now it's better than

1008
00:44:03,670 --> 00:44:11,200
ever and the yes I've helped to shape it

1009
00:44:06,789 --> 00:44:14,529
but the the staff has always been what

1010
00:44:11,199 --> 00:44:16,689
has made NCSE successful there's no way

1011
00:44:14,530 --> 00:44:19,210
that one person could have done all that

1012
00:44:16,690 --> 00:44:22,210

we've accomplished over the last couple

1013

00:44:19,210 --> 00:44:22,920

decades almost three decades but who's

1014

00:44:22,210 --> 00:44:26,720

counting

1015

00:44:22,920 --> 00:44:29,659

so you know people have to remember that

1016

00:44:26,719 --> 00:44:32,519

NCSE is going to be just fine without me

1017

00:44:29,659 --> 00:44:36,389

we'll get a new director who's who will

1018

00:44:32,519 --> 00:44:41,068

be creative and energetic and probably

1019

00:44:36,389 --> 00:44:45,000

better raising money than i am and this

1020

00:44:41,068 --> 00:44:49,108

he or she will do just fine and and

1021

00:44:45,000 --> 00:44:52,409

frankly if it doesn't then i will have

1022

00:44:49,108 --> 00:44:55,338

failed mmm because what my goal is my

1023

00:44:52,409 --> 00:44:58,259

goal is for three or four years from now

1024

00:44:55,338 --> 00:45:04,858

some new staff member shows up at NC SC

1025

00:44:58,260 --> 00:45:08,609

and says genie who an unusual goal

1026

00:45:04,858 --> 00:45:10,170

Janice manual well i'll be i am when you

1027
00:45:08,608 --> 00:45:11,940
used to come when i come knocking on the

1028
00:45:10,170 --> 00:45:13,650
door it will be sad not to come back to

1029
00:45:11,940 --> 00:45:15,150
your office and sit down and have a cup

1030
00:45:13,650 --> 00:45:17,068
of coffee and yeah but you know where I

1031
00:45:15,150 --> 00:45:19,410
man I do I've got your number genius

1032
00:45:17,068 --> 00:45:21,690
good and I'm making I have made your

1033
00:45:19,409 --> 00:45:23,639
coming over for dinner oh yes yeah I had

1034
00:45:21,690 --> 00:45:25,980
I got up early this morning and I went

1035
00:45:23,639 --> 00:45:28,618
out to my backyard and I picked lemons

1036
00:45:25,980 --> 00:45:30,900
for my Meyer lemon tree I made you a

1037
00:45:28,619 --> 00:45:33,000
lemon meringue huh it's going to be

1038
00:45:30,900 --> 00:45:35,910
tasty now you are folks there's perks to

1039
00:45:33,000 --> 00:45:39,559
this job I tell you genius got the Gary

1040
00:45:35,909 --> 00:45:39,558
but I'm so glad to see you again

1041
00:45:45,820 --> 00:45:51,650
hello Skepta potties dr. Willis here

1042
00:45:49,460 --> 00:45:53,720
from RI odds with some highlights of the

1043
00:45:51,650 --> 00:45:56,059
news in science for this past week and

1044
00:45:53,719 --> 00:45:59,299
as always news from the world of science

1045
00:45:56,059 --> 00:46:00,860
has come thick and fast a Swedish study

1046
00:45:59,300 --> 00:46:03,230
has found that children with high

1047
00:46:00,860 --> 00:46:05,750
proportions of polyunsaturated fatty

1048
00:46:03,230 --> 00:46:08,030
acids in cord blood at Birth are more

1049
00:46:05,750 --> 00:46:10,639
likely to develop respiratory and skin

1050
00:46:08,030 --> 00:46:13,160
allergies in their early teens the fatty

1051
00:46:10,639 --> 00:46:15,859
acids in question were omega-3 and

1052
00:46:13,159 --> 00:46:17,960
omega-6 but the mechanism by which these

1053
00:46:15,860 --> 00:46:20,630
lipids might affect allergy development

1054
00:46:17,960 --> 00:46:22,820
remains unknown other researchers in

1055

00:46:20,630 --> 00:46:25,010
this area urge care when interpreting

1056
00:46:22,820 --> 00:46:27,920
this study and have expressed skepticism

1057
00:46:25,010 --> 00:46:29,870
about its methodology a study in The

1058
00:46:27,920 --> 00:46:32,930
Lancet has found that prolonged exposure

1059
00:46:29,869 --> 00:46:35,389
to particulate air pollution increases

1060
00:46:32,929 --> 00:46:38,809
the risk of lung cancer even at levels

1061
00:46:35,389 --> 00:46:40,699
below European Union limits this is one

1062
00:46:38,809 --> 00:46:43,039
of the largest studies of its kind and

1063
00:46:40,699 --> 00:46:45,439
includes data from Australia the study

1064
00:46:43,039 --> 00:46:47,809
also showed that short-term exposure to

1065
00:46:45,440 --> 00:46:49,760
most major air pollutants appears to

1066
00:46:47,809 --> 00:46:52,509
increase the risk of being hospitalized

1067
00:46:49,760 --> 00:46:54,800
for and dying from heart failure

1068
00:46:52,510 --> 00:46:57,140
Australia's chief scientist Professor

1069
00:46:54,800 --> 00:46:59,330

Ian Chubb has identified antibiotic

1070

00:46:57,139 --> 00:47:02,119

resistance as an important scientific

1071

00:46:59,329 --> 00:47:04,009

issue for the Australian public he says

1072

00:47:02,119 --> 00:47:05,359

it has the potential to become one of

1073

00:47:04,010 --> 00:47:08,180

the world's biggest public health

1074

00:47:05,360 --> 00:47:10,099

challenges a new paper released by the

1075

00:47:08,179 --> 00:47:12,559

office of the chief scientist this week

1076

00:47:10,099 --> 00:47:14,960

says that urgent action must be taken to

1077

00:47:12,559 --> 00:47:18,440

address the rising threat of antibiotic

1078

00:47:14,960 --> 00:47:20,990

resistance good bacteria from poo may

1079

00:47:18,440 --> 00:47:23,150

help an inflamed tummy an article

1080

00:47:20,989 --> 00:47:25,929

published in Nature this week identified

1081

00:47:23,150 --> 00:47:29,240

a combination of 17 human-derived

1082

00:47:25,929 --> 00:47:31,549

Clostridium that reduce the severity of

1083

00:47:29,239 --> 00:47:34,250

allergic and inflammatory conditions in

1084
00:47:31,550 --> 00:47:36,530
the guts of mice it suggested that these

1085
00:47:34,250 --> 00:47:38,989
strains may be useful candidates for the

1086
00:47:36,530 --> 00:47:41,720
future development of oral bacterial or

1087
00:47:38,989 --> 00:47:44,209
probiotic therapeutics to treat human

1088
00:47:41,719 --> 00:47:46,969
inflammatory disorders and finally this

1089
00:47:44,210 --> 00:47:49,880
week does a child's bedtime affect their

1090
00:47:46,969 --> 00:47:51,980
brain power a UK study found that going

1091
00:47:49,880 --> 00:47:54,500
to bed at different times every night

1092
00:47:51,980 --> 00:47:57,010
out early childhood seems to curb a

1093
00:47:54,500 --> 00:47:59,449
child's brain power they looked at over

1094
00:47:57,010 --> 00:48:01,490
11,000 seven year olds and found that

1095
00:47:59,449 --> 00:48:04,339
those with irregular bedtimes at age

1096
00:48:01,489 --> 00:48:07,039
three had lower scores in reading maths

1097
00:48:04,340 --> 00:48:09,410
and spatial awareness this applied to

1098
00:48:07,039 --> 00:48:10,969
both boys and girls suggesting that

1099
00:48:09,409 --> 00:48:12,710
around the age of three could be a

1100
00:48:10,969 --> 00:48:14,959
sensitive period for cognitive

1101
00:48:12,710 --> 00:48:17,659
development more information on these

1102
00:48:14,960 --> 00:48:19,970
and other science news stories including

1103
00:48:17,659 --> 00:48:23,750
the original papers where possible can

1104
00:48:19,969 --> 00:48:27,409
be found on the Arias website are I aus

1105
00:48:23,750 --> 00:48:30,170
org dot a you and to wrap up this week's

1106
00:48:27,409 --> 00:48:31,909
bulletin some recent science history did

1107
00:48:30,170 --> 00:48:34,280
you realize that it's been one year

1108
00:48:31,909 --> 00:48:36,649
since the announcement of the discovery

1109
00:48:34,280 --> 00:48:39,830
of the Higgs boson what have we learnt

1110
00:48:36,650 --> 00:48:42,139
in the last 365 days you may well ask

1111
00:48:39,829 --> 00:48:44,840
and what's so important about a Higgs

1112

00:48:42,139 --> 00:48:47,509
boson anyway find out more in a guest

1113
00:48:44,840 --> 00:48:50,240
blog on the are isles website that's our

1114
00:48:47,510 --> 00:48:52,100
oils org do i you that's it from me for

1115
00:48:50,239 --> 00:48:54,289
this week and remember it's our

1116
00:48:52,099 --> 00:48:56,980
obligation not to believe in the

1117
00:48:54,289 --> 00:48:56,980
unbelievable

1118
00:48:57,550 --> 00:49:02,350
hi I'm Finn and I'm Rebecca and where

1119
00:49:00,219 --> 00:49:04,119
the skipper cons skipper Collins is an

1120
00:49:02,349 --> 00:49:05,799
Irish podcast by the Dublin skeptics

1121
00:49:04,119 --> 00:49:07,389
society it takes a conversational

1122
00:49:05,800 --> 00:49:08,620
Reverend look at science news and

1123
00:49:07,389 --> 00:49:12,129
skeptical topics from an Irish

1124
00:49:08,619 --> 00:49:15,179
perspective you can find us at WWDC

1125
00:49:12,130 --> 00:49:15,180
Afrikaans com

1126
00:49:15,588 --> 00:49:19,279

spirit is strong

1127

00:49:27,230 --> 00:49:31,230

thank you for listening to the skeptic

1128

00:49:29,730 --> 00:49:34,050

zone while I'm still here at the end of

1129

00:49:31,230 --> 00:49:35,639

this massive hallway at the amazing

1130

00:49:34,050 --> 00:49:37,620

meeting there's a session in progress

1131

00:49:35,639 --> 00:49:39,869

right now so it's a little bit quiet out

1132

00:49:37,619 --> 00:49:41,940

here but soon I'm sure they'll be hordes

1133

00:49:39,869 --> 00:49:45,539

of people walking past the Australian

1134

00:49:41,940 --> 00:49:48,150

skeptics table now before I go before I

1135

00:49:45,539 --> 00:49:50,309

go this week something to look out for

1136

00:49:48,150 --> 00:49:52,139

it to go to and there'll be a link in

1137

00:49:50,309 --> 00:49:55,380

the on the web page to show notes for

1138

00:49:52,139 --> 00:49:57,210

this episode the ABC science show

1139

00:49:55,380 --> 00:50:00,590

catalysts in Australia in the last week

1140

00:49:57,210 --> 00:50:04,889

ran a program very critical indeed of

1141
00:50:00,590 --> 00:50:07,740
chiropractic and it was quite a report

1142
00:50:04,889 --> 00:50:10,049
quite an interesting report if you look

1143
00:50:07,739 --> 00:50:13,739
at the show notes for this week or if

1144
00:50:10,050 --> 00:50:15,240
you google catalyst ABC television or if

1145
00:50:13,739 --> 00:50:18,750
you know the website you'll certainly

1146
00:50:15,239 --> 00:50:21,869
find it and I can sincerely recommend

1147
00:50:18,750 --> 00:50:23,760
you invest half an hour and watch that

1148
00:50:21,869 --> 00:50:26,159
report it's not geo locked so you can

1149
00:50:23,760 --> 00:50:28,980
see that online video all around the

1150
00:50:26,159 --> 00:50:31,230
world so that's catalyst program from

1151
00:50:28,980 --> 00:50:34,829
ABC television in Australia and their

1152
00:50:31,230 --> 00:50:36,360
special report on chiropractic well

1153
00:50:34,829 --> 00:50:37,590
coming up over the next few weeks I hope

1154
00:50:36,360 --> 00:50:39,750
to bring you lots of interesting

1155
00:50:37,590 --> 00:50:42,570
insights and interviews from the amazing

1156
00:50:39,750 --> 00:50:44,730
meeting here in Las Vegas but until then

1157
00:50:42,570 --> 00:50:47,070
I better put this recording equipment

1158
00:50:44,730 --> 00:50:49,980
away and set up my table with their

1159
00:50:47,070 --> 00:50:52,650
copies of the skeptic magazine and talk

1160
00:50:49,980 --> 00:50:54,389
to people for the rest of the day and uh

1161
00:50:52,650 --> 00:50:57,119
next week this is Richard Saunders

1162
00:50:54,389 --> 00:50:59,960
signing off from the amazing meeting in

1163
00:50:57,119 --> 00:50:59,960
Las Vegas

1164
00:51:01,838 --> 00:51:09,440
you've been listening to the skeptics

1165
00:51:04,278 --> 00:51:13,278
are visit our website at [www skeptics](http://www.skeptics.com) on

1166
00:51:09,440 --> 00:51:15,940
TV for comments contacts and extra video

1167
00:51:13,278 --> 00:51:15,940
reports

1168
00:51:18,559 --> 00:51:20,590
Oh