

The Skeptic Zone

Show 247 - 13 July 2013



Dr Eugenie C. Scott

1
00:00:23,050 --> 00:00:09,100
welcome to the skeptic zone the podcast

2
00:00:28,730 --> 00:00:25,550
hello and welcome to the skeptic zone

3
00:00:30,920 --> 00:00:28,740
today is july 13 2013 and this is your

4
00:00:34,010 --> 00:00:30,930
host Steve a novella joining me this

5
00:00:37,610 --> 00:00:34,020
week are Richard Saunders hello Bob

6
00:00:40,790 --> 00:00:37,620
novella hey everybody Jay novella hey

7
00:00:42,860 --> 00:00:40,800
guys and Chris Brown well hello again

8
00:00:44,990 --> 00:00:42,870
everyone now you haven't picked the

9
00:00:47,660 --> 00:00:45,000
wrong podcast folks this is the skipping

10
00:00:49,100 --> 00:00:47,670
stone after all but I'm with my good

11
00:00:50,330 --> 00:00:49,110
friends here from the skeptics guide to

12
00:00:52,970 --> 00:00:50,340
the universe Wow we're all here at the

13
00:00:54,860 --> 00:00:52,980

end of this huge hallway outside the

14

00:00:57,229 --> 00:00:54,870

ballroom where the conventions going on

15

00:01:00,110 --> 00:00:57,239

the amazing reading how many times is

16

00:01:02,540 --> 00:01:00,120

this for you now Steve I think this is

17

00:01:04,430 --> 00:01:02,550

sex right we started with the fifth one

18

00:01:08,060 --> 00:01:04,440

this is the eleventh one that exactly

19

00:01:10,760 --> 00:01:08,070

this is 11 yeah so 60 then 77 I can Wow

20

00:01:12,350 --> 00:01:10,770

including Tammy Australia I would make

21

00:01:14,749 --> 00:01:12,360

eight if you include time Australia

22

00:01:16,850 --> 00:01:14,759

hello yeah that's fantastic and your

23

00:01:18,980 --> 00:01:16,860

table is about six or seven tables down

24

00:01:20,870 --> 00:01:18,990

the hall from here a busy table I bet

25

00:01:22,609 --> 00:01:20,880

yeah we do we love coming to these

26
00:01:24,260 --> 00:01:22,619
conventions and they were talking to our

27
00:01:26,270 --> 00:01:24,270
listeners in this pre I pretty steady

28
00:01:28,130 --> 00:01:26,280
stream past the table absolutely yeah

29
00:01:29,870 --> 00:01:28,140
it's good and you've got the power bands

30
00:01:32,120 --> 00:01:29,880
this time the SGU power bands are you're

31
00:01:33,440 --> 00:01:32,130
wearing one Bob yes but my favorite

32
00:01:34,999 --> 00:01:33,450
color black of course i love it i love

33
00:01:37,100 --> 00:01:35,009
scene skeptics guide to the universe on

34
00:01:38,449 --> 00:01:37,110
this band although one of my problems

35
00:01:39,800 --> 00:01:38,459
with these bands that I'm afraid people

36
00:01:41,749 --> 00:01:39,810
will see it and think it's a real power

37
00:01:42,859 --> 00:01:41,759
balance band and if I don't talk to them

38
00:01:45,380 --> 00:01:42,869

and explain to them they're gonna think

39

00:01:49,160 --> 00:01:45,390

I'm I'm supporting this crap but oh well

40

00:01:51,139 --> 00:01:49,170

and I'm sad to say that after running

41

00:01:54,699 --> 00:01:51,149

through space and time evil captain j

42

00:01:57,410 --> 00:01:54,709

novella has caught me Captain Saunders

43

00:01:59,029 --> 00:01:57,420

good to see you Jay good to see Kourtney

44

00:02:01,699 --> 00:01:59,039

here too yeah we wanted to bring the

45

00:02:03,290 --> 00:02:01,709

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

46

00:02:05,990 --> 00:02:03,300

we can't wait to go home tomorrow yeah

47

00:02:07,820 --> 00:02:06,000

that's right that's right well folks

48

00:02:09,260 --> 00:02:07,830

coming up on this week's show not too

49

00:02:10,339 --> 00:02:09,270

much to do with the amazing meeting that

50

00:02:12,589 --> 00:02:10,349

will be coming up in the weeks to come

51
00:02:14,540 --> 00:02:12,599
but we have an extended interview with

52
00:02:16,339 --> 00:02:14,550
dr. Eugenie Scott from the National

53
00:02:18,650 --> 00:02:16,349
Center for Science Education a favorite

54
00:02:21,680 --> 00:02:18,660
of everybody I think she's a wonderful

55
00:02:24,559 --> 00:02:21,690
lady yeah it's it's a sad to hear that

56
00:02:27,350 --> 00:02:24,569
she's retiring but you know AI guess you

57
00:02:29,570 --> 00:02:27,360
can't keep going forever but she's done

58
00:02:31,190 --> 00:02:29,580
an amazing job at the NCSE and now we're

59
00:02:32,390 --> 00:02:31,200
just waiting to see who can possibly

60
00:02:34,880 --> 00:02:32,400
fill her shoes

61
00:02:36,380 --> 00:02:34,890
organization it's hard to imagine it's

62
00:02:38,600 --> 00:02:36,390
hard to imagine so perfect for that role

63
00:02:39,890 --> 00:02:38,610

what we'll do that we'll start that

64

00:02:41,750 --> 00:02:39,900

interview rolling and while that's

65

00:02:43,100 --> 00:02:41,760

happening I'm going to run down to in

66

00:02:45,710 --> 00:02:43,110

the hall I'm going to grab a large

67

00:03:07,800 --> 00:02:45,720

coffee and a Vegemite bagel and I'll let

68

00:03:12,190 --> 00:03:10,599

I'm delighted absolutely delighted to be

69

00:03:14,199 --> 00:03:12,200

back here once again at the National

70

00:03:16,000 --> 00:03:14,209

Center for Science Education with my

71

00:03:18,699 --> 00:03:16,010

good friend don't pee Eugenie Scott

72

00:03:20,470 --> 00:03:18,709

hello Jeanie hello Richard so good to be

73

00:03:22,229 --> 00:03:20,480

back thank you i was should have been

74

00:03:24,910 --> 00:03:22,239

here a few days ago but I was sort of

75

00:03:26,740 --> 00:03:24,920

having a bit of a rough time with the

76

00:03:28,750 --> 00:03:26,750

rotten bug I picked up but I'm feeling

77

00:03:30,550 --> 00:03:28,760

much better well if you start hacking

78

00:03:32,979 --> 00:03:30,560

and wheezing will forgive you thank you

79

00:03:36,460 --> 00:03:32,989

well we'll blame it on our West Coast

80

00:03:37,869 --> 00:03:36,470

viruses that that you not not that

81

00:03:39,699 --> 00:03:37,879

you're such a hothouse flower from

82

00:03:41,770 --> 00:03:39,709

Australia but you have not experienced

83

00:03:43,390 --> 00:03:41,780

such things but you know we have

84

00:03:45,670 --> 00:03:43,400

different viruses than you do so you get

85

00:03:47,110 --> 00:03:45,680

you get cut a little slack now these are

86

00:03:48,789 --> 00:03:47,120

that interesting it's so this is an

87

00:03:51,009 --> 00:03:48,799

interesting segue into evolution isn't

88

00:03:55,420 --> 00:03:51,019

it you GT because everything every same

89
00:03:57,640 --> 00:03:55,430
way you cannot escape you cannot imagine

90
00:03:58,780 --> 00:03:57,650
if there was only one cold virus or

91
00:04:00,670 --> 00:03:58,790
something like that it would have been

92
00:04:02,589 --> 00:04:00,680
knocked on the head years ago I mean you

93
00:04:04,089 --> 00:04:02,599
get a good get at once and your body

94
00:04:05,469 --> 00:04:04,099
would build up the immunity then you

95
00:04:08,319 --> 00:04:05,479
could sell through the rest of your life

96
00:04:09,969 --> 00:04:08,329
quite happily but no LS and that poor

97
00:04:11,800 --> 00:04:09,979
little virus would have to keep looking

98
00:04:16,060 --> 00:04:11,810
for other creatures to infect in order

99
00:04:17,979 --> 00:04:16,070
to yes well from a viruses standpoint

100
00:04:20,949 --> 00:04:17,989
you you obviously do want to have those

101

00:04:23,290 --> 00:04:20,959

those mutations taking place to shift

102

00:04:25,779 --> 00:04:23,300

shift around his genome a bit so i must

103

00:04:27,279 --> 00:04:25,789

mutate incredibly quickly they do yeah

104

00:04:28,960 --> 00:04:27,289

that's the nature of iris this is

105

00:04:31,180 --> 00:04:28,970

another thing we've never discussed and

106

00:04:34,570 --> 00:04:31,190

it's sort of just yeah what real science

107

00:04:37,779 --> 00:04:34,580

there's no the evolution of Votto a

108

00:04:39,310 --> 00:04:37,789

skeptic sir so good yeah well I think

109

00:04:41,350 --> 00:04:39,320

we've gone about as deep into the

110

00:04:46,120 --> 00:04:41,360

evolution of viruses as i understand i

111

00:04:51,040 --> 00:04:46,130

do know that there is such a huge huge

112

00:04:53,140 --> 00:04:51,050

number of versions of the cold virus I

113

00:04:55,839 --> 00:04:53,150

mean but you know one of the things that

114

00:04:58,629 --> 00:04:55,849

is really interesting about viral

115

00:05:01,570 --> 00:04:58,639

diseases like coals and mumps and things

116

00:05:03,430 --> 00:05:01,580

like that is it's very very likely that

117

00:05:06,100 --> 00:05:03,440

Neanderthals never suffered from them

118

00:05:07,900 --> 00:05:06,110

really yeah because in order to really

119

00:05:10,900 --> 00:05:07,910

get a virus going

120

00:05:12,550 --> 00:05:10,910

in terms of transmissibility from one

121

00:05:15,730 --> 00:05:12,560

host to another you have to have a

122

00:05:20,140 --> 00:05:15,740

pretty good-sized population and until

123

00:05:23,200 --> 00:05:20,150

really until frankly the agricultural

124

00:05:25,150 --> 00:05:23,210

revolution humans just did not live in

125

00:05:27,820 --> 00:05:25,160

big enough communities to keep a virus

126

00:05:29,380 --> 00:05:27,830

code ever thought about that yeah well

127

00:05:32,550 --> 00:05:29,390

anthropologist think about this kind of

128

00:05:34,840 --> 00:05:32,560

stuff all the time so glad you came by

129

00:05:36,040 --> 00:05:34,850

you weren't as fascinating you wouldn't

130

00:05:39,190 --> 00:05:36,050

see in the end result with a runny nose

131

00:05:40,510 --> 00:05:39,200

maybe wealthy and probably not well they

132

00:05:42,760 --> 00:05:40,520

have another Neanderthal smacked a

133

00:05:45,190 --> 00:05:42,770

minute that's not what you're talking

134

00:05:46,780 --> 00:05:45,200

about yeah yeah nope no Neanderthal

135

00:05:49,260 --> 00:05:46,790

would have suffered my friend Richard as

136

00:05:54,310 --> 00:05:49,270

you have these last few could take

137

00:05:58,480 --> 00:05:54,320

wheezing and hacking away they now

138

00:06:01,570 --> 00:05:58,490

bacterial diseases are different but

139

00:06:04,570 --> 00:06:01,580

viral diseases as I understand it really

140

00:06:06,700 --> 00:06:04,580

do require a pretty good-sized host

141

00:06:08,740 --> 00:06:06,710

reservoir in order to maintain

142

00:06:10,480 --> 00:06:08,750

themselves well and when what better

143

00:06:12,090 --> 00:06:10,490

host reservoir than the human race at

144

00:06:13,990 --> 00:06:12,100

the moment we're especially with the

145

00:06:16,210 --> 00:06:14,000

intercontinental travel and all the rest

146

00:06:18,790 --> 00:06:16,220

of it oh we can swap around Moses light

147

00:06:21,790 --> 00:06:18,800

in nothing flat yeah that's actually one

148

00:06:24,940 --> 00:06:21,800

of the one of the staples of science

149

00:06:28,090 --> 00:06:24,950

videos it is yeah epidemic driver

150

00:06:31,470 --> 00:06:28,100

struggle that game and and on up in him

151
00:06:34,770 --> 00:06:31,480
yeah yeah did you ever read a book now

152
00:06:37,270 --> 00:06:34,780
we might actually talk about something a

153
00:06:39,490 --> 00:06:37,280
substantial at some point but speaking

154
00:06:41,950 --> 00:06:39,500
of speaking of fiction that deals with

155
00:06:44,200 --> 00:06:41,960
apocalyptic viruses it's wiping us out

156
00:06:46,920 --> 00:06:44,210
did you have to read an old old book

157
00:06:49,270 --> 00:06:46,930
written in the 50s called earth abides a

158
00:06:51,310 --> 00:06:49,280
counselor that I have no yeah well it

159
00:06:53,730 --> 00:06:51,320
for any of your listeners who are

160
00:06:59,730 --> 00:06:53,740
looking for kind of a real pioneering

161
00:07:02,290 --> 00:06:59,740
science fiction book of this genre of

162
00:07:04,450 --> 00:07:02,300
the majority of the species gets wiped

163
00:07:08,610 --> 00:07:04,460

out you a very short period of time and

164

00:07:13,780 --> 00:07:08,620

you have small group groups of people

165

00:07:16,270 --> 00:07:13,790

living in there the physical plant shall

166

00:07:18,839 --> 00:07:16,280

we say of humanity the cities are there

167

00:07:20,790 --> 00:07:18,849

it's just people who died base

168

00:07:22,980 --> 00:07:20,800

earth abides was written by a geographer

169

00:07:25,079 --> 00:07:22,990

and of course now I can't remember his

170

00:07:27,199 --> 00:07:25,089

first name last name is Stuart it'll

171

00:07:30,149 --> 00:07:27,209

George Stewart something like that mmm

172

00:07:32,820 --> 00:07:30,159

written in the 50s and he was actually a

173

00:07:35,850 --> 00:07:32,830

geology oh sorry geography professor at

174

00:07:38,879 --> 00:07:35,860

UC Berkeley and he wrote this book about

175

00:07:41,669 --> 00:07:38,889

what happens if you take away most of

176

00:07:44,070 --> 00:07:41,679

the humans on the planet but you leave

177

00:07:47,040 --> 00:07:44,080

the sort of the physical plant of

178

00:07:48,839 --> 00:07:47,050

civilization and you leave you know

179

00:07:52,379 --> 00:07:48,849

plants and animals pretty much as they

180

00:07:54,749 --> 00:07:52,389

are um what happens over time and has a

181

00:07:57,509 --> 00:07:54,759

geographer he really does integrate a

182

00:08:00,659 --> 00:07:57,519

lot of science into it one of the things

183

00:08:04,169 --> 00:08:00,669

that happens according to his reading of

184

00:08:05,909 --> 00:08:04,179

natural history is that bright red

185

00:08:08,219 --> 00:08:05,919

flowers that that human beings have

186

00:08:09,689 --> 00:08:08,229

selected for our ornamental flowers with

187

00:08:12,570 --> 00:08:09,699

there tends to be a disproportionate

188

00:08:16,859 --> 00:08:12,580

number of bright reds they tend to be

189

00:08:18,570 --> 00:08:16,869

much more much less common um and I

190

00:08:20,369 --> 00:08:18,580

forget exactly what the reason for this

191

00:08:22,889 --> 00:08:20,379

probably has to do with pollination yeah

192

00:08:25,529 --> 00:08:22,899

and what kinds of things pollinating

193

00:08:27,540 --> 00:08:25,539

insects see more easily than others it's

194

00:08:29,339 --> 00:08:27,550

it's been a long time I think I better

195

00:08:32,519 --> 00:08:29,349

go back and reread it I it's because I'm

196

00:08:35,909 --> 00:08:32,529

enjoying thinking about it and what

197

00:08:39,199 --> 00:08:35,919

happens to dogs when people are no

198

00:08:41,519 --> 00:08:39,209

longer really maintaining the

199

00:08:42,929 --> 00:08:41,529

specialized breeds that we have you

200

00:08:44,780 --> 00:08:42,939

could imagine what would have the dogs

201
00:08:46,980 --> 00:08:44,790
yeah well after a couple of generations

202
00:08:49,230 --> 00:08:46,990
you kind of get back to your basic

203
00:08:52,980 --> 00:08:49,240
yellow dog probably as we don't refer to

204
00:08:55,379 --> 00:08:52,990
them in the south what I've sometimes

205
00:08:58,110 --> 00:08:55,389
jokingly call I love dogs and you know

206
00:08:59,730 --> 00:08:58,120
when I retire I'm going to get a dog I

207
00:09:01,050 --> 00:08:59,740
don't know what my husband that isn't

208
00:09:02,730 --> 00:09:01,060
what your cats going to say about well

209
00:09:04,199 --> 00:09:02,740
yeah my cats not going to be too happy

210
00:09:06,509 --> 00:09:04,209
neither is my husband we got to work

211
00:09:10,860 --> 00:09:06,519
this out but I am dog deprived i really

212
00:09:12,780 --> 00:09:10,870
need a dog but you know the dogs that

213
00:09:15,629 --> 00:09:12,790

you find in the archaeological record

214

00:09:17,639 --> 00:09:15,639

the first domesticated dogs well that

215

00:09:20,340 --> 00:09:17,649

you find in any kind of number are in

216

00:09:22,679 --> 00:09:20,350

the Middle East around you know three

217

00:09:26,910 --> 00:09:22,689

four thousand years ago nuh tophian a

218

00:09:30,059 --> 00:09:26,920

culture archaeologically speaking these

219

00:09:32,550 --> 00:09:30,069

dogs were sort of medium-sized they were

220

00:09:36,980 --> 00:09:32,560

very generic they did

221

00:09:45,180 --> 00:09:42,750

Huskies and and dogs like German

222

00:09:47,820 --> 00:09:45,190

Shepherds they didn't have the bizarre

223

00:09:50,460 --> 00:09:47,830

features like the achondroplastic legs

224

00:09:52,170 --> 00:09:50,470

like you find on dachshunds or the

225

00:09:53,519 --> 00:09:52,180

squashed faces you have to find in some

226
00:09:56,040 --> 00:09:53,529
of the pugs and there are other animals

227
00:09:58,530 --> 00:09:56,050
we obviously don't know what kind of

228
00:10:00,300 --> 00:09:58,540
coats they had long or short but they

229
00:10:01,910 --> 00:10:00,310
did have curly tails which is something

230
00:10:04,079 --> 00:10:01,920
that shows up fairly early and

231
00:10:06,180 --> 00:10:04,089
domesticated dogs and also in

232
00:10:07,769 --> 00:10:06,190
domesticated foxes you know those

233
00:10:09,690 --> 00:10:07,779
studies that were done it's it's one of

234
00:10:12,150 --> 00:10:09,700
these canid traits that doesn't occur

235
00:10:13,860 --> 00:10:12,160
much in the wild but which human beings

236
00:10:17,040 --> 00:10:13,870
when they see they kind of likes they

237
00:10:20,040 --> 00:10:17,050
select for it but probably getting back

238
00:10:21,630 --> 00:10:20,050

to Stewart's earth abides probably dogs

239

00:10:24,480 --> 00:10:21,640

would sort of go back to that kind of

240

00:10:26,550 --> 00:10:24,490

basic know to phien middle-sized no

241

00:10:29,630 --> 00:10:26,560

special characteristics just your your

242

00:10:34,920 --> 00:10:29,640

basic four-on-the-floor candid your and

243

00:10:36,960 --> 00:10:34,930

cats on the other hand do just fine no

244

00:10:39,780 --> 00:10:36,970

problem with them surviving they do just

245

00:10:44,280 --> 00:10:39,790

fine yeah but it's a great book it

246

00:10:46,770 --> 00:10:44,290

really is very interesting sheep sheeps

247

00:10:48,810 --> 00:10:46,780

days are numbered sheep don't really do

248

00:10:50,820 --> 00:10:48,820

very well without human being stick I

249

00:10:53,790 --> 00:10:50,830

know a large numbers that we have them

250

00:10:56,010 --> 00:10:53,800

on the planet that's purely physically

251

00:10:59,850 --> 00:10:56,020

and besides there aren't exactly

252

00:11:01,770 --> 00:10:59,860

selected anymore for their wit they're

253

00:11:03,990 --> 00:11:01,780

pretty Dumbo they're pretty goats on the

254

00:11:06,000 --> 00:11:04,000

other hand goats on the other hand are

255

00:11:07,470 --> 00:11:06,010

much more adaptable so he sort of goes

256

00:11:10,860 --> 00:11:07,480

through all of the different you know

257

00:11:13,560 --> 00:11:10,870

domesticated animals sweet corn forget

258

00:11:17,060 --> 00:11:13,570

it if you know it is such a fragile

259

00:11:23,730 --> 00:11:17,070

plant in the sense that we have selected

260

00:11:26,340 --> 00:11:23,740

maize or sweet corn to be this high

261

00:11:30,060 --> 00:11:26,350

highly starchy but impossible to

262

00:11:32,970 --> 00:11:30,070

reproduce on its own timing when there's

263

00:11:35,579 --> 00:11:32,980

just all sorts of reasons why why corn

264

00:11:38,660 --> 00:11:35,589

and its little husks and everything just

265

00:11:40,949 --> 00:11:38,670

isn't set up to reproduce itself yeah so

266

00:11:41,280 --> 00:11:40,959

people basically go back to hunting him

267

00:11:43,470 --> 00:11:41,290

down

268

00:11:45,920 --> 00:11:43,480

in this book which is kind of a plot

269

00:11:49,740 --> 00:11:45,930

line that you find in a lot of these

270

00:11:52,590 --> 00:11:49,750

post apocalypse apocalyptic books guess

271

00:11:56,610 --> 00:11:52,600

you'd have to depends on the size of the

272

00:11:59,460 --> 00:11:56,620

population but there's a huge you know

273

00:12:02,249 --> 00:11:59,470

in this story I think it was a virus

274

00:12:05,809 --> 00:12:02,259

that spread very quickly and only a

275

00:12:08,850 --> 00:12:05,819

small number of people in earth abides

276

00:12:12,090 --> 00:12:08,860

were naturally resistant to the virus

277

00:12:14,249 --> 00:12:12,100

and oddly enough people who had been

278

00:12:16,590 --> 00:12:14,259

bitten by a rattlesnake who just you

279

00:12:20,160 --> 00:12:16,600

know happened to produce antibodies that

280

00:12:22,439 --> 00:12:20,170

were close enough to the natural

281

00:12:23,999 --> 00:12:22,449

antibodies that some people had that

282

00:12:25,139 --> 00:12:24,009

they were able to fight off this printer

283

00:12:26,610 --> 00:12:25,149

people haven't been bitten by a

284

00:12:29,280 --> 00:12:26,620

rattlesnake are there going to be a very

285

00:12:32,670 --> 00:12:29,290

small number yes exactly so most people

286

00:12:34,650 --> 00:12:32,680

die in this in this great epidemic but

287

00:12:37,379 --> 00:12:34,660

anyway it's a fun book it's it's worth

288

00:12:40,680 --> 00:12:37,389

it shouldn't be confined to the scrap

289

00:12:42,389 --> 00:12:40,690

heap of science fiction history it

290

00:12:44,280 --> 00:12:42,399

should be revived at regular intervals

291

00:12:45,540 --> 00:12:44,290

because it's it's well done it sounds

292

00:12:46,889 --> 00:12:45,550

like it would make a great movie but of

293

00:12:49,350 --> 00:12:46,899

course this sort of movie has been them

294

00:12:51,660 --> 00:12:49,360

hmm so you seem to be a lot of movies

295

00:12:54,480 --> 00:12:51,670

about this I'm not what's a good story

296

00:12:57,360 --> 00:12:54,490

uh-huh it's it's a great what a story

297

00:12:59,400 --> 00:12:57,370

okay sure I'm surprised just looking

298

00:13:00,960 --> 00:12:59,410

around this this room this is a new room

299

00:13:02,910 --> 00:13:00,970

you have here at the National Center for

300

00:13:06,210 --> 00:13:02,920

Science Education this is your new

301
00:13:08,550 --> 00:13:06,220
conference media office I guess you'd

302
00:13:11,400 --> 00:13:08,560
say it's a lovely big room it's welded

303
00:13:14,970 --> 00:13:11,410
with bookshelves and skulls everywhere

304
00:13:18,660 --> 00:13:14,980
fossils of our our collection of fossils

305
00:13:20,910 --> 00:13:18,670
we've got mostly fastball almost

306
00:13:24,030 --> 00:13:20,920
entirely fossil humans occasionally we

307
00:13:26,790 --> 00:13:24,040
have the the rare primate and of course

308
00:13:29,879 --> 00:13:26,800
we have oranges and gorillas in the chimp

309
00:13:31,730 --> 00:13:29,889
Oh any other in yonder t-rex what's a

310
00:13:35,850 --> 00:13:31,740
conference room without a dinosaur there

311
00:13:39,689 --> 00:13:35,860
there you go yeah the easy to spot we

312
00:13:42,720 --> 00:13:39,699
remodeled a chunk of our archives into a

313
00:13:45,230 --> 00:13:42,730

conference room when the we added the

314

00:13:49,290 --> 00:13:45,240

two new climate change staff members and

315

00:13:53,670 --> 00:13:49,300

I'm afraid our small office is just with

316

00:13:54,840 --> 00:13:53,680

our open cubicle framework just it was

317

00:13:56,910 --> 00:13:54,850

they was just too noisy

318

00:13:59,850 --> 00:13:56,920

needed a place where people could have

319

00:14:03,689 --> 00:13:59,860

conference calls have media interviews

320

00:14:05,009 --> 00:14:03,699

do the occasional podcast yes and when

321

00:14:08,670 --> 00:14:05,019

one of the things that we're hoping to

322

00:14:10,350 --> 00:14:08,680

get is to get some lights appropriate

323

00:14:11,939 --> 00:14:10,360

lights and reflectors so that we can

324

00:14:14,400 --> 00:14:11,949

actually do some filming in here as well

325

00:14:16,800 --> 00:14:14,410

oh it would be great because of the the

326

00:14:18,600 --> 00:14:16,810

the backdrop of all these bookshelves or

327

00:14:20,509 --> 00:14:18,610

skulls and books well I think so

328

00:14:22,860 --> 00:14:20,519

scholarly they would have our stuff

329

00:14:25,650 --> 00:14:22,870

nothing like a wood background here I

330

00:14:28,379 --> 00:14:25,660

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

331

00:14:30,509 --> 00:14:28,389

really do good film unless you have the

332

00:14:32,939 --> 00:14:30,519

proper lighting that's true I know that

333

00:14:35,340 --> 00:14:32,949

very well yes indeed we have some we

334

00:14:36,990 --> 00:14:35,350

have some promo pieces on our youtube

335

00:14:40,769 --> 00:14:37,000

site that every time i see i kind of

336

00:14:44,220 --> 00:14:40,779

cringe because everybody looks so awful

337

00:14:46,199 --> 00:14:44,230

you don't know well in the sense that

338

00:14:48,840 --> 00:14:46,209

the lights hitting the face is wrong and

339

00:14:49,889 --> 00:14:48,850

you know everything you end up even if

340

00:14:54,120 --> 00:14:49,899

you don't have bags under your eyes

341

00:14:55,499 --> 00:14:54,130

that's what you wind up with the lights

342

00:14:58,319 --> 00:14:55,509

coming in at the wrong angle and

343

00:15:00,269 --> 00:14:58,329

whatever so hopefully we'll we'll be

344

00:15:02,639 --> 00:15:00,279

able to get somebody to donate some

345

00:15:04,949 --> 00:15:02,649

lights if you're listening we have a we

346

00:15:07,620 --> 00:15:04,959

have some listed on amazon wish list or

347

00:15:09,449 --> 00:15:07,630

we'll get a grant and get some

348

00:15:10,949 --> 00:15:09,459

appropriate lights and maybe do some

349

00:15:12,600 --> 00:15:10,959

more YouTube stuff I'm looking forward

350

00:15:15,120 --> 00:15:12,610

to that that would be good YouTube stuff

351
00:15:17,189 --> 00:15:15,130
is always pretty important I think now

352
00:15:19,230 --> 00:15:17,199
you need it's not that long ago I was

353
00:15:21,090 --> 00:15:19,240
here intervening you about the fact that

354
00:15:24,360 --> 00:15:21,100
you've taken on this whole new area of a

355
00:15:26,460 --> 00:15:24,370
climate change when was that we got our

356
00:15:29,460 --> 00:15:26,470
first funding for the climate change

357
00:15:33,030 --> 00:15:29,470
initiative in the summer of 2011 and in

358
00:15:35,189 --> 00:15:33,040
the fall of 2011 mark McCaffrey came on

359
00:15:38,579 --> 00:15:35,199
and we started preparing to launch so to

360
00:15:41,160 --> 00:15:38,589
speak and in I think with January of

361
00:15:43,139 --> 00:15:41,170
2012 we announced the climate change

362
00:15:45,150 --> 00:15:43,149
initiative and so it's been about a year

363
00:15:46,920 --> 00:15:45,160

and a half ok yeah we got a little

364

00:15:50,280 --> 00:15:46,930

additional funding from an anonymous

365

00:15:52,470 --> 00:15:50,290

donor who which was very gratefully

366

00:15:54,929 --> 00:15:52,480

received and we were able to hire our

367

00:15:57,780 --> 00:15:54,939

second climate change person minda

368

00:16:01,110 --> 00:15:57,790

Rebecca it was a biologist does ecology

369

00:16:05,070 --> 00:16:01,120

things and so now we have a good strong

370

00:16:07,970 --> 00:16:05,080

staff and we're starting to

371

00:16:12,720 --> 00:16:07,980

starting some really very interesting

372

00:16:15,720 --> 00:16:12,730

projects that I think will will help a

373

00:16:22,050 --> 00:16:15,730

lot in terms of getting the science of

374

00:16:24,840 --> 00:16:22,060

climate change into the schools helping

375

00:16:26,670 --> 00:16:24,850

teachers to deal with the pushback that

376

00:16:29,010 --> 00:16:26,680

they get not just from evolution but

377

00:16:30,570 --> 00:16:29,020

also from climate change yeah yeah which

378

00:16:33,690 --> 00:16:30,580

of course why we took this tough this

379

00:16:36,270 --> 00:16:33,700

topic on yes we were running into the

380

00:16:38,820 --> 00:16:36,280

same kinds of well I can see the

381

00:16:40,470 --> 00:16:38,830

similarities and even when i'm back in

382

00:16:42,560 --> 00:16:40,480

australia listening to comment or

383

00:16:45,030 --> 00:16:42,570

reading the newspapers or whatever it is

384

00:16:47,760 --> 00:16:45,040

so much of the time we'll have these

385

00:16:49,290 --> 00:16:47,770

outspoken people who who are like the

386

00:16:50,640 --> 00:16:49,300

creationists running around saying that

387

00:16:53,580 --> 00:16:50,650

this is all a scare it's all a

388

00:16:55,200 --> 00:16:53,590

conspiracy who frankly don't know what

389

00:16:59,070 --> 00:16:55,210

they're talking about now I must admit

390

00:17:00,510 --> 00:16:59,080

when it comes to even even more than a

391

00:17:01,590 --> 00:17:00,520

shallow look at something like climate

392

00:17:05,670 --> 00:17:01,600

change I don't know what I'm talking

393

00:17:08,070 --> 00:17:05,680

about so it's amazing other people think

394

00:17:10,470 --> 00:17:08,080

they're suddenly experts and the

395

00:17:16,790 --> 00:17:10,480

consensus of scientific opinion is wrong

396

00:17:18,840 --> 00:17:16,800

you know yeah you know it's funny well

397

00:17:21,720 --> 00:17:18,850

what we learned in dealing with

398

00:17:24,960 --> 00:17:21,730

evolution for so many decades is that

399

00:17:27,180 --> 00:17:24,970

it's really not about the science it's

400

00:17:30,420 --> 00:17:27,190

about the motivation that people have

401
00:17:33,900 --> 00:17:30,430
for accepting or rejecting certain

402
00:17:35,220 --> 00:17:33,910
authorities know you and I know probably

403
00:17:38,940 --> 00:17:35,230
a lot of the people listening to this

404
00:17:42,150 --> 00:17:38,950
show know that the consensus view of the

405
00:17:43,770 --> 00:17:42,160
vast vast majority of scientists all

406
00:17:46,170 --> 00:17:43,780
over their world not just in the United

407
00:17:48,600 --> 00:17:46,180
States is that living things have common

408
00:17:52,670 --> 00:17:48,610
ancestors the universe is very old the

409
00:17:54,870 --> 00:17:52,680
planet is very old billions of years and

410
00:18:00,810 --> 00:17:54,880
evolution in other words has taken place

411
00:18:03,000 --> 00:18:00,820
yeah and they vast a percentage of

412
00:18:08,190 --> 00:18:03,010
scientists particularly those who do

413
00:18:11,580 --> 00:18:08,200

research in climate science are in

414

00:18:13,740 --> 00:18:11,590

agreement that the planet is definitely

415

00:18:16,560 --> 00:18:13,750

getting warm

416

00:18:19,280 --> 00:18:16,570

warmer the rate of change has increased

417

00:18:23,430 --> 00:18:19,290

precipitously in the last 50 years and

418

00:18:27,510 --> 00:18:23,440

that human activity especially in the

419

00:18:29,220 --> 00:18:27,520

release of warming gases has a great

420

00:18:32,520 --> 00:18:29,230

deal to do especially with the rate of

421

00:18:34,350 --> 00:18:32,530

change that's taking place now and this

422

00:18:38,310 --> 00:18:34,360

is something that really is not being

423

00:18:42,330 --> 00:18:38,320

debated mooring scientists but if you

424

00:18:46,080 --> 00:18:42,340

have certain ideological beliefs in the

425

00:18:48,960 --> 00:18:46,090

case of evolution the special creation

426

00:18:51,720 --> 00:18:48,970

is the major ideological belief that's

427

00:18:54,060 --> 00:18:51,730

you know keeps people from accepting the

428

00:18:56,310 --> 00:18:54,070

science you're going to look at the

429

00:18:59,310 --> 00:18:56,320

creation science experts right the

430

00:19:02,160 --> 00:18:59,320

people who agree are you in other words

431

00:19:08,220 --> 00:19:02,170

exactly and and they present arguments

432

00:19:11,460 --> 00:19:08,230

that sound scientific they may be based

433

00:19:13,790 --> 00:19:11,470

in science the arguments of creation

434

00:19:16,290 --> 00:19:13,800

science proponents have been examined by

435

00:19:18,210 --> 00:19:16,300

mainstream scientists have been shown

436

00:19:20,400 --> 00:19:18,220

over and over and over to be false and

437

00:19:23,970 --> 00:19:20,410

to be not supported by evidence and

438

00:19:26,640 --> 00:19:23,980

should not be accepted but there is this

439

00:19:29,310 --> 00:19:26,650

tendency to to accept these views

440

00:19:31,190 --> 00:19:29,320

because they don't contradict the

441

00:19:33,720 --> 00:19:31,200

ideological position that that

442

00:19:35,610 --> 00:19:33,730

conservative Christians hold now in the

443

00:19:37,970 --> 00:19:35,620

case of climate science the pattern is

444

00:19:40,590 --> 00:19:37,980

the same the details are different no

445

00:19:43,280 --> 00:19:40,600

there are ideological reasons for

446

00:19:48,030 --> 00:19:43,290

rejecting anthropogenic climate change

447

00:19:49,950 --> 00:19:48,040

in the United States these are political

448

00:19:54,950 --> 00:19:49,960

ideological views or economic

449

00:20:01,050 --> 00:19:54,960

ideological views views that American

450

00:20:03,810 --> 00:20:01,060

independence or security are being

451
00:20:06,630 --> 00:20:03,820
threatened individual freedoms are being

452
00:20:09,470 --> 00:20:06,640
threatened if these people who claim

453
00:20:12,870 --> 00:20:09,480
anthropogenic climate change is correct

454
00:20:14,760 --> 00:20:12,880
are correct that we'll have to you know

455
00:20:16,560 --> 00:20:14,770
we can't drive our big cars we all have

456
00:20:19,110 --> 00:20:16,570
to turn to priuses and change our light

457
00:20:20,610 --> 00:20:19,120
bulbs and we're risking the security of

458
00:20:22,410 --> 00:20:20,620
our country because we're not using

459
00:20:23,070 --> 00:20:22,420
fossil fuels for the army or whatever

460
00:20:24,899 --> 00:20:23,080
you know I mean

461
00:20:27,389 --> 00:20:24,909
they're these feelings really are very

462
00:20:29,490 --> 00:20:27,399
very strong yeah or there is a feeling

463
00:20:34,669 --> 00:20:29,500

from an economic ideological standpoint

464

00:20:37,110 --> 00:20:34,679

often expressed by libertarians that

465

00:20:40,769 --> 00:20:37,120

anthropogenic climate change is really

466

00:20:44,070 --> 00:20:40,779

an attack upon the capitalist system the

467

00:20:49,320 --> 00:20:44,080

end that constraint should not be placed

468

00:20:50,789 --> 00:20:49,330

upon the industries that produce carbon

469

00:20:52,950 --> 00:20:50,799

there the coal and gas and oil

470

00:20:54,350 --> 00:20:52,960

industries no constraint should be

471

00:20:56,190 --> 00:20:54,360

placed upon them because that is

472

00:20:57,779 --> 00:20:56,200

socialistic instead of being

473

00:20:59,340 --> 00:20:57,789

capitalistic and the free market will

474

00:21:01,680 --> 00:20:59,350

solve all problems there these

475

00:21:03,299 --> 00:21:01,690

ideological views that really do shape

476

00:21:05,820 --> 00:21:03,309

what science you're going to pay

477

00:21:09,029 --> 00:21:05,830

attention to so when somebody who has

478

00:21:12,060 --> 00:21:09,039

that kind of ideology hears from a

479

00:21:14,600 --> 00:21:12,070

climate science denier that here's the

480

00:21:17,460 --> 00:21:14,610

science that shows that the planet

481

00:21:19,320 --> 00:21:17,470

either is not getting warmer which is

482

00:21:21,899 --> 00:21:19,330

harder and harder to support view of the

483

00:21:24,870 --> 00:21:21,909

evidence is so strong but minimally that

484

00:21:27,090 --> 00:21:24,880

it's not people's fault if the planet is

485

00:21:29,820 --> 00:21:27,100

getting warmer it's auto some natural

486

00:21:32,820 --> 00:21:29,830

cycle and unstoppable solar cycles a

487

00:21:34,350 --> 00:21:32,830

very famous video oh of course we've

488

00:21:35,789 --> 00:21:34,360

heard the one it's not in fact getting

489

00:21:38,940 --> 00:21:35,799

warmer we're just about to you for an

490

00:21:41,220 --> 00:21:38,950

ice age I hear that quite a bit well

491

00:21:44,129 --> 00:21:41,230

they're not paying or my favorite which

492

00:21:47,850 --> 00:21:44,139

is the that 1990 it was the hottest year

493

00:21:50,879 --> 00:21:47,860

in the last 50 years so therefore it's

494

00:21:53,100 --> 00:21:50,889

not getting warmer and of course that's

495

00:21:55,139 --> 00:21:53,110

just you know that that is the most

496

00:21:57,149 --> 00:21:55,149

egregious cherry-picking of data and

497

00:21:59,580 --> 00:21:57,159

possibly tues no no no the most

498

00:22:01,889 --> 00:21:59,590

egregious is when when we have a cold

499

00:22:03,419 --> 00:22:01,899

day in Sydney oh yeah but they say hi

500

00:22:05,330 --> 00:22:03,429

all these people who say well it's

501
00:22:08,610 --> 00:22:05,340
getting hotter it's freezing outside

502
00:22:12,659 --> 00:22:08,620
well was it 2009 whatever when when

503
00:22:15,409 --> 00:22:12,669
there was by ice no in Washington DC see

504
00:22:18,120 --> 00:22:15,419
ya what do you mean global warming

505
00:22:21,120 --> 00:22:18,130
sweetie you're confusing weather with

506
00:22:26,639 --> 00:22:21,130
climate they haven't had the same is

507
00:22:30,029 --> 00:22:26,649
great a little little clip on YouTube

508
00:22:33,659 --> 00:22:30,039
that was made by some Swedes I sometime

509
00:22:35,220 --> 00:22:33,669
use it in my talks and it's just is this

510
00:22:35,590 --> 00:22:35,230
great little illustration of the

511
00:22:37,779 --> 00:22:35,600
different

512
00:22:39,909 --> 00:22:37,789
between weather and climate and what

513
00:22:42,789 --> 00:22:39,919

you're seeing is this guy this little

514

00:22:45,310 --> 00:22:42,799

cartoon figure of a man walking a dog on

515

00:22:48,390 --> 00:22:45,320

a leash and he's sort of plotting along

516

00:22:50,770 --> 00:22:48,400

and he started walking you know like

517

00:22:52,510 --> 00:22:50,780

diagonally across the screen that you

518

00:22:54,640 --> 00:22:52,520

are observing here at this little

519

00:22:56,110 --> 00:22:54,650

cartoon figure and the dog is doing the

520

00:22:58,779 --> 00:22:56,120

dog thing the dog is rendered to the

521

00:23:01,060 --> 00:22:58,789

left and to the right aneese is going up

522

00:23:03,549 --> 00:23:01,070

and down and zipping back and forth on

523

00:23:05,799 --> 00:23:03,559

the leash meanwhile the guy holding the

524

00:23:08,980 --> 00:23:05,809

leash the the owner of the dog is just

525

00:23:12,460 --> 00:23:08,990

plotting a straight line yeah and then

526

00:23:16,149 --> 00:23:12,470

the the camera so to speak on this

527

00:23:20,020 --> 00:23:16,159

little vignette pulls back and you see

528

00:23:22,930 --> 00:23:20,030

that the dog is is well I should say

529

00:23:25,600 --> 00:23:22,940

properly speaking the man is walking in

530

00:23:30,850 --> 00:23:25,610

a diagonal line so to speak across an XY

531

00:23:34,510 --> 00:23:30,860

axis graph the dog is crossing the line

532

00:23:36,190 --> 00:23:34,520

up and down Aziz on as leash the dog is

533

00:23:38,799 --> 00:23:36,200

the climate is the dog is the weather

534

00:23:41,440 --> 00:23:38,809

the weight which goes up and down but

535

00:23:43,930 --> 00:23:41,450

the climate is really controlling where

536

00:23:48,549 --> 00:23:43,940

that dog is going to be and so that it's

537

00:23:50,529 --> 00:23:48,559

this is very lovely little hmm I like

538

00:23:53,080 --> 00:23:50,539

that oh yeah yeah I'll send you a link

539

00:23:54,520 --> 00:23:53,090

to it and I was all included on the show

540

00:23:55,990 --> 00:23:54,530

notes for this episode that sounds like

541

00:24:00,279 --> 00:23:56,000

oh really it's actually I think would

542

00:24:02,110 --> 00:24:00,289

you remember what it's called the

543

00:24:04,870 --> 00:24:02,120

mammoth dog climate yeah you probably

544

00:24:08,220 --> 00:24:04,880

find it that way and but I'm pretty sure

545

00:24:10,570 --> 00:24:08,230

it's the Swedes who did it guy who I

546

00:24:12,310 --> 00:24:10,580

have it on my computer and I can tell

547

00:24:14,409 --> 00:24:12,320

you exactly where it is on my dog

548

00:24:16,060 --> 00:24:14,419

wallpaper but I can tell you the name

549

00:24:17,680 --> 00:24:16,070

I'll let the listeners know before this

550

00:24:19,419 --> 00:24:17,690

search this show is out don't worry

551
00:24:21,520 --> 00:24:19,429
about yeah it's great fun what the one

552
00:24:23,320 --> 00:24:21,530
is a post editing interviews we it's

553
00:24:25,180 --> 00:24:23,330
just marvelous we can fit all this sort

554
00:24:29,169 --> 00:24:25,190
of stuff it in post fix it in post as

555
00:24:31,210 --> 00:24:29,179
they said they said at the creation so

556
00:24:33,070 --> 00:24:31,220
yeah it's interesting that that you can

557
00:24:34,510 --> 00:24:33,080
use this wealth of information

558
00:24:37,120 --> 00:24:34,520
especially when it comes to the

559
00:24:38,529 --> 00:24:37,130
arguments both things really what you've

560
00:24:41,350 --> 00:24:38,539
learned from the creationism and

561
00:24:43,930 --> 00:24:41,360
evolution story I think well the reason

562
00:24:46,200 --> 00:24:43,940
we took on this whole new subject area

563
00:24:48,060 --> 00:24:46,210

as you say

564

00:24:50,520 --> 00:24:48,070

this is not a subject area that you are

565

00:24:53,100 --> 00:24:50,530

I are intimately acquainted or are you

566

00:24:55,980 --> 00:24:53,110

to some degree what we have done is said

567

00:24:57,900 --> 00:24:55,990

okay we're going to take a look at the

568

00:25:00,390 --> 00:24:57,910

consensus of the scientific community of

569

00:25:03,180 --> 00:25:00,400

people who have done the hard work of

570

00:25:06,330 --> 00:25:03,190

figuring out how the world works in this

571

00:25:09,690 --> 00:25:06,340

particular context and you know we're

572

00:25:13,130 --> 00:25:09,700

going to we're going to look at at the

573

00:25:16,590 --> 00:25:13,140

outcome of what we know is this very

574

00:25:19,820 --> 00:25:16,600

iterative process of of progress and

575

00:25:22,680 --> 00:25:19,830

critique and progress and critique and

576

00:25:23,970 --> 00:25:22,690

once there is a consensus and we're

577

00:25:26,490 --> 00:25:23,980

going to go along with that consensus

578

00:25:32,040 --> 00:25:26,500

even though we are not researchers in

579

00:25:34,290 --> 00:25:32,050

this field yeah yeah and I I can I can

580

00:25:36,800 --> 00:25:34,300

have confidence in that process because

581

00:25:39,690 --> 00:25:36,810

I am very familiar with how that process

582

00:25:42,360 --> 00:25:39,700

operated when it comes to evolution and

583

00:25:44,370 --> 00:25:42,370

when I was actually a real genuine

584

00:25:48,270 --> 00:25:44,380

scientist as opposed to playing one on

585

00:25:49,860 --> 00:25:48,280

television I can yeah I knew I I was

586

00:25:52,770 --> 00:25:49,870

contributing to that process I mean I

587

00:25:55,470 --> 00:25:52,780

know how science works and I know how it

588

00:25:57,600 --> 00:25:55,480

came out the case of evolution living

589

00:26:01,080 --> 00:25:57,610

things of common ancestors Pope this is

590

00:26:04,080 --> 00:26:01,090

a this is it and I see the same sort of

591

00:26:10,590 --> 00:26:04,090

consensus having arrived at within the

592

00:26:13,620 --> 00:26:10,600

climate science community as well so it

593

00:26:15,510 --> 00:26:13,630

really is it really is not just

594

00:26:17,400 --> 00:26:15,520

accepting the dogma shall we say of

595

00:26:20,730 --> 00:26:17,410

science it's actually understanding how

596

00:26:23,010 --> 00:26:20,740

science works and accepting a consensus

597

00:26:25,560 --> 00:26:23,020

view which might change yeah yeah this

598

00:26:28,110 --> 00:26:25,570

is okay this is very hard for a lot of

599

00:26:30,510 --> 00:26:28,120

people to cochlear to grasp especially a

600

00:26:32,820 --> 00:26:30,520

lot of the people I deal with in the in

601
00:26:34,560 --> 00:26:32,830
the new age supernatural paranormal

602
00:26:36,540 --> 00:26:34,570
realms shall I say psychics and

603
00:26:38,820 --> 00:26:36,550
clairvoyants in this sort of ilk who

604
00:26:41,910 --> 00:26:38,830
will gladly use scientific sounding

605
00:26:44,640 --> 00:26:41,920
words and phrases but this concept of

606
00:26:46,410 --> 00:26:44,650
the scientific consensus that's what you

607
00:26:49,650 --> 00:26:46,420
support because people who research

608
00:26:53,549 --> 00:26:49,660
should this is their conclusion but you

609
00:26:56,259 --> 00:26:53,559
you also are prepared to

610
00:26:58,359 --> 00:26:56,269
come and go with the tight as it was as

611
00:27:00,279 --> 00:26:58,369
things change in a to a lot of people

612
00:27:02,259 --> 00:27:00,289
that's that's beyond the pale and

613
00:27:05,139 --> 00:27:02,269

another interesting point is a lot of

614

00:27:06,989 --> 00:27:05,149

people will hang on to their beliefs and

615

00:27:09,940 --> 00:27:06,999

that dope about they'll follow XYZ

616

00:27:11,229 --> 00:27:09,950

person who says this because I guess at

617

00:27:13,810 --> 00:27:11,239

times they're seen as the Maverick

618

00:27:16,389 --> 00:27:13,820

here's the one guy who's standing up

619

00:27:18,519 --> 00:27:16,399

against the you know he they laughed at

620

00:27:19,690 --> 00:27:18,529

Galileo I hear that so many times I want

621

00:27:21,070 --> 00:27:19,700

to pull my hair out you know they

622

00:27:22,810 --> 00:27:21,080

laughed at those of the clown they left

623

00:27:25,509 --> 00:27:22,820

it bozo the clown it's called Sagan said

624

00:27:29,469 --> 00:27:25,519

yes that's right being laughed at his

625

00:27:30,999 --> 00:27:29,479

hardly grounds for agencies point but

626

00:27:33,609 --> 00:27:31,009

but it's a wonderful thing for them to

627

00:27:36,430 --> 00:27:33,619

use because they say well he was right

628

00:27:38,649 --> 00:27:36,440

there for this person who they're

629

00:27:40,659 --> 00:27:38,659

laughing at must be right and that's how

630

00:27:43,659 --> 00:27:40,669

the thinking is wired into the culture

631

00:27:45,639 --> 00:27:43,669

though oh yeah I mean we you know we we

632

00:27:48,310 --> 00:27:45,649

share basically sort of Western

633

00:27:51,460 --> 00:27:48,320

industrial culture Australian in the US

634

00:27:54,129 --> 00:27:51,470

and english-speaking and it's it's kind

635

00:27:56,229 --> 00:27:54,139

of wired into our culture we really like

636

00:27:58,960 --> 00:27:56,239

underdogs yeah we really like the

637

00:28:00,909 --> 00:27:58,970

Mavericks we really like the the High

638

00:28:03,149 --> 00:28:00,919

Noon guy who's standing over the crowd

639

00:28:07,060 --> 00:28:03,159
and going his own way and stuff

640

00:28:14,469 --> 00:28:07,070
sometimes when I talk about science as a

641

00:28:16,180 --> 00:28:14,479
way of knowing how I'll express it in a

642

00:28:18,580 --> 00:28:16,190
way that I hope gets across the idea

643

00:28:21,039 --> 00:28:18,590
that some aspects of science are very

644

00:28:22,960 --> 00:28:21,049
stable and don't change like we were

645

00:28:26,379 --> 00:28:22,970
talking about other aspects of of

646

00:28:27,879 --> 00:28:26,389
science are more labile and they do

647

00:28:30,669 --> 00:28:27,889
change and those are the parts that we

648

00:28:33,039 --> 00:28:30,679
you know we're worth good wood with if

649

00:28:35,019 --> 00:28:33,049
you think it's useful to think of

650

00:28:37,539 --> 00:28:35,029
science as a set of concentric circles

651

00:28:39,639 --> 00:28:37,549

yes this is a good model yeah in the

652

00:28:41,710 --> 00:28:39,649

middle is the core ideas of science yeah

653

00:28:43,629 --> 00:28:41,720

the next concentric circle around that

654

00:28:46,570 --> 00:28:43,639

are their frontier ideas of science and

655

00:28:48,849 --> 00:28:46,580

then on the concentric circle around

656

00:28:52,139 --> 00:28:48,859

that is the fringe viewers is the part

657

00:28:55,719 --> 00:28:52,149

where we like to splash with our

658

00:28:57,759 --> 00:28:55,729

paranormal and all the other kind of fun

659

00:28:59,710 --> 00:28:57,769

stuff especially that you do but the

660

00:29:02,680 --> 00:28:59,720

core ideas of science are not likely to

661

00:29:04,629 --> 00:29:02,690

change the big idea that living things

662

00:29:06,030 --> 00:29:04,639

of common ancestors the basic idea of

663

00:29:08,760 --> 00:29:06,040

biological evolution

664

00:29:11,100 --> 00:29:08,770

not going to change the big idea of

665

00:29:14,730 --> 00:29:11,110

continental drift that the planets move

666

00:29:16,650 --> 00:29:14,740

around and the surface of the planet has

667

00:29:19,800 --> 00:29:16,660

changed over time that's not going to

668

00:29:21,810 --> 00:29:19,810

change you in the frontier the the next

669

00:29:23,430 --> 00:29:21,820

concentric circle out the frontier ideas

670

00:29:25,860 --> 00:29:23,440

of science that's where the research is

671

00:29:29,640 --> 00:29:25,870

going on that's where discoveries are

672

00:29:32,520 --> 00:29:29,650

being made and that's where things very

673

00:29:35,790 --> 00:29:32,530

likely will change and can change or be

674

00:29:39,020 --> 00:29:35,800

modified but the nice thing about

675

00:29:42,090 --> 00:29:39,030

science is that very rarely does

676
00:29:44,700 --> 00:29:42,100
everything change you know I used to

677
00:29:46,530 --> 00:29:44,710
just want to smack my physical

678
00:29:50,900 --> 00:29:46,540
anthropology colleagues upside the head

679
00:29:54,210 --> 00:29:50,910
when one of them would start a talk or

680
00:29:57,000 --> 00:29:54,220
worse yet a class everything in my field

681
00:30:01,710 --> 00:29:57,010
has changed since last semester no it

682
00:30:03,690 --> 00:30:01,720
hasn't oh really what you mean females

683
00:30:07,590 --> 00:30:03,700
don't have whiter sciatic matches than

684
00:30:09,330 --> 00:30:07,600
men who knew well I don't mean that well

685
00:30:12,690 --> 00:30:09,340
of course not there's most of the stuff

686
00:30:15,210 --> 00:30:12,700
doesn't change and what we will change

687
00:30:17,820 --> 00:30:15,220
the details and we change sometimes you

688
00:30:20,970 --> 00:30:17,830

change very tiny details but the core

689

00:30:23,850 --> 00:30:20,980

ideas yeah change yeah yeah and even and

690

00:30:26,040 --> 00:30:23,860

a lot of those frontier ideas will go

691

00:30:27,990 --> 00:30:26,050

into the core and some frontier ideas

692

00:30:31,980 --> 00:30:28,000

are going to be dropped because they

693

00:30:35,460 --> 00:30:31,990

don't work but that the planet is

694

00:30:37,470 --> 00:30:35,470

getting warm is an observation really

695

00:30:39,360 --> 00:30:37,480

it's not even a core idea this is this

696

00:30:44,190 --> 00:30:39,370

is just a flat-out observation this is a

697

00:30:47,310 --> 00:30:44,200

you know an observation is a fact yo how

698

00:30:50,040 --> 00:30:47,320

we explain that warming the idea that

699

00:30:51,660 --> 00:30:50,050

there are certain gases that because of

700

00:30:55,650 --> 00:30:51,670

their chemistry because of the physics

701

00:30:58,620 --> 00:30:55,660

involved act to warm the planet things

702

00:31:00,780 --> 00:30:58,630

like co2 things like methane the the

703

00:31:02,910 --> 00:31:00,790

important warming gases which are caught

704

00:31:04,800 --> 00:31:02,920

in our atmosphere and which are helping

705

00:31:07,650 --> 00:31:04,810

to insulate the planet and make it

706

00:31:11,190 --> 00:31:07,660

toaster that's those are basic core

707

00:31:13,230 --> 00:31:11,200

ideas and so our explanations for the

708

00:31:17,340 --> 00:31:13,240

current warming of this planet which is

709

00:31:19,250 --> 00:31:17,350

an observation our core ideas which is

710

00:31:20,960 --> 00:31:19,260

which is why

711

00:31:23,540 --> 00:31:20,970

there is this very strong consensus

712

00:31:26,000 --> 00:31:23,550

about anthropogenic global warming yeah

713

00:31:28,910 --> 00:31:26,010

well I don't know what you're gonna be

714

00:31:31,370 --> 00:31:28,920

taking on next Jeannie retirement

715

00:31:35,090 --> 00:31:31,380

retirement and never sure you're not

716

00:31:37,040 --> 00:31:35,100

truly truly yeah no yeah I am I have

717

00:31:40,340 --> 00:31:37,050

announced my retirement but by the end

718

00:31:42,880 --> 00:31:40,350

of the year one well good grief hope you

719

00:31:46,460 --> 00:31:42,890

well let me tell you right here and now

720

00:31:49,550 --> 00:31:46,470

gotcha well you know the time has come

721

00:31:52,280 --> 00:31:49,560

curtain of the time has come NCSE is at

722

00:31:54,700 --> 00:31:52,290

this very exciting time in its evolution

723

00:31:57,230 --> 00:31:54,710

shall we sit in its trajectory it's

724

00:31:59,360 --> 00:31:57,240

ontogeny if you will we've got this

725

00:32:02,300 --> 00:31:59,370

wonderful new exciting program that

726

00:32:05,360 --> 00:32:02,310

climate change program is starting we're

727

00:32:06,920 --> 00:32:05,370

where we've grown so much from when we

728

00:32:09,980 --> 00:32:06,930

just started out and it was just me

729

00:32:14,750 --> 00:32:09,990

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

730

00:32:17,060 --> 00:32:14,760

26 years but it's time for new ideas it

731

00:32:18,980 --> 00:32:17,070

really is it's time for somebody new to

732

00:32:21,200 --> 00:32:18,990

come in and really take this

733

00:32:24,440 --> 00:32:21,210

organization in new and creative

734

00:32:28,610 --> 00:32:24,450

directions you know it is the nature of

735

00:32:31,970 --> 00:32:28,620

nonprofits to thrive when you have new

736

00:32:33,350 --> 00:32:31,980

blood coming in and it's time oh well

737

00:32:35,030 --> 00:32:33,360

what do you think you'll have more time

738

00:32:37,790 --> 00:32:35,040

to do the same sort of stuff will you

739

00:32:38,960 --> 00:32:37,800

can be doing different stuff well I

740

00:32:42,680 --> 00:32:38,970

won't be waking up at night worrying

741

00:32:45,710 --> 00:32:42,690

about money well that will be nice

742

00:32:47,090 --> 00:32:45,720

that'll be real nice and see I'll get

743

00:32:49,430 --> 00:32:47,100

that dog that I was talking you'll get

744

00:32:51,190 --> 00:32:49,440

that dog but I don't suppose this is

745

00:32:54,700 --> 00:32:51,200

going to mean that end things like

746

00:32:57,170 --> 00:32:54,710

lecturing and visiting actually I have

747

00:32:59,630 --> 00:32:57,180

speaking engagements lined up through I

748

00:33:03,470 --> 00:32:59,640

think next me you go yeah i'd be

749

00:33:05,270 --> 00:33:03,480

surprised we're though nobody's actually

750

00:33:07,310 --> 00:33:05,280

called up and said oh I'm sorry we want

751
00:33:09,410 --> 00:33:07,320
to cancel yeah you're the doctor yeah

752
00:33:13,160 --> 00:33:09,420
I'll still be good for a few for a few

753
00:33:15,080 --> 00:33:13,170
more months I won't have forgotten

754
00:33:17,390 --> 00:33:15,090
everything I know but now you're just

755
00:33:19,820 --> 00:33:17,400
about to go to the Grand Canyon again

756
00:33:22,220 --> 00:33:19,830
yeah I am it's very exciting see now

757
00:33:25,490 --> 00:33:22,230
what I wanted to do is on the

758
00:33:27,680 --> 00:33:25,500
description of the I mean you know we

759
00:33:29,750 --> 00:33:27,690
have advertised for a new executive

760
00:33:31,270 --> 00:33:29,760
director and the board is in the process

761
00:33:33,370 --> 00:33:31,280
of reviewing

762
00:33:36,640 --> 00:33:33,380
resumes that have been submitted and

763
00:33:38,440 --> 00:33:36,650

we'll be making decisions about who to

764

00:33:42,180 --> 00:33:38,450

interview and so forth in the very near

765

00:33:45,990 --> 00:33:42,190

future but I wanted to build into the

766

00:33:50,130 --> 00:33:46,000

the job description must hate

767

00:33:52,630 --> 00:33:50,140

unreasonably hot weather in cold water

768

00:33:56,020 --> 00:33:52,640

well because that's what the Grand

769

00:33:56,890 --> 00:33:56,030

Canyon courtesy of course yes but I

770

00:33:59,260 --> 00:33:56,900

don't think that's going to happen

771

00:34:01,780 --> 00:33:59,270

that's one of the real great perks of

772

00:34:03,250 --> 00:34:01,790

this job you see is is being able to go

773

00:34:05,680 --> 00:34:03,260

to Grand Canyon every year it's a

774

00:34:07,870 --> 00:34:05,690

fabulous experience so we will be

775

00:34:10,870 --> 00:34:07,880

compact have our dates for next year

776

00:34:13,870 --> 00:34:10,880

already we have booked our our very

777

00:34:16,360 --> 00:34:13,880

favorite outfitter mochi mac to go down

778

00:34:18,280 --> 00:34:16,370

Grand Canyon again so any of your

779

00:34:20,350 --> 00:34:18,290

listeners who want to go take our

780

00:34:22,930 --> 00:34:20,360

creation and evolution tour of Grand

781

00:34:25,120 --> 00:34:22,940

Canyon which you really must do someone

782

00:34:29,800 --> 00:34:25,130

wages you really have to open be such

783

00:34:32,260 --> 00:34:29,810

fun and I will I I can't guarantee that

784

00:34:34,270 --> 00:34:32,270

I will be hosting this trip and yours in

785

00:34:38,350 --> 00:34:34,280

the future unless of course we get that

786

00:34:40,360 --> 00:34:38,360

ideal candidate who hates water but I

787

00:34:42,610 --> 00:34:40,370

might I might just be tagging along as

788

00:34:44,230 --> 00:34:42,620

you know the thing about the canyon that

789

00:34:47,080 --> 00:34:44,240

gets in your blood yeah it's such a

790

00:34:49,480 --> 00:34:47,090

fabulous I say I'm very excited about

791

00:34:50,919 --> 00:34:49,490

have you get on that one that new think

792

00:34:52,510 --> 00:34:50,929

i saw on television where you can walk

793

00:34:54,970 --> 00:34:52,520

out over the Grand Canyon is at a

794

00:34:58,120 --> 00:34:54,980

different place that is on one of the

795

00:35:02,020 --> 00:34:58,130

side canyons and right somebody one of

796

00:35:08,200 --> 00:35:02,030

the Indian reservations there and no i

797

00:35:11,320 --> 00:35:08,210

haven't I I you can see it from from we

798

00:35:13,300 --> 00:35:11,330

sail past it all really happened if you

799

00:35:16,450 --> 00:35:13,310

look up you can see the particular

800

00:35:19,090 --> 00:35:16,460

Canyon and there are little the little

801
00:35:22,960 --> 00:35:19,100
uh it's like a horseshoe comes out the

802
00:35:27,910 --> 00:35:22,970
glass right about it you can't be voted

803
00:35:30,220 --> 00:35:27,920
yes to it to take that but it's I'm just

804
00:35:33,310 --> 00:35:30,230
I'm probably too cheap to do it i think

805
00:35:34,930 --> 00:35:33,320
it's 25 bucks or something and i can

806
00:35:37,630 --> 00:35:34,940
look down in the canyon without actually

807
00:35:39,030 --> 00:35:37,640
i just go there i guess uh well and

808
00:35:41,590 --> 00:35:39,040
besides the fun part is looking up

809
00:35:42,180 --> 00:35:41,600
looking up but from the what from the

810
00:35:44,970 --> 00:35:42,190
river

811
00:35:46,410 --> 00:35:44,980
I mean people go to grand canyon and of

812
00:35:48,630 --> 00:35:46,420
course you go to the edge and you look

813
00:35:50,190 --> 00:35:48,640

over and there's this oh my god kind of

814

00:35:52,530 --> 00:35:50,200

moment because you appreciate the

815

00:35:55,140 --> 00:35:52,540

fastness and the beauty and the just the

816

00:36:00,089 --> 00:35:55,150

sweep and the spectacle of this fabulous

817

00:36:02,819 --> 00:36:00,099

feature but it's very different being on

818

00:36:05,819 --> 00:36:02,829

the river and looking up you you get a

819

00:36:10,650 --> 00:36:05,829

totally different perspective of the

820

00:36:13,230 --> 00:36:10,660

canyon the majesty and the sweep and the

821

00:36:16,170 --> 00:36:13,240

feeling of age is there but you

822

00:36:18,480 --> 00:36:16,180

experience it differently and I you know

823

00:36:20,130 --> 00:36:18,490

it's just even if you've looked at Grand

824

00:36:22,349 --> 00:36:20,140

Canyon from the top I would encourage

825

00:36:24,480 --> 00:36:22,359

everyone to look at it from the bottom

826

00:36:27,120 --> 00:36:24,490

up it's a pretty extraordinary

827

00:36:28,410 --> 00:36:27,130

experience now just just something's

828

00:36:30,120 --> 00:36:28,420

just occurred to me something I caught

829

00:36:31,740 --> 00:36:30,130

up with a little while ago on youtube in

830

00:36:34,980 --> 00:36:31,750

fact it was a show called conspiracy

831

00:36:38,370 --> 00:36:34,990

theory road trip have you seen that yes

832

00:36:44,190 --> 00:36:38,380

yes and they did they did a show on

833

00:36:46,470 --> 00:36:44,200

Grand Canyon yes which they had a they

834

00:36:48,329 --> 00:36:46,480

actually had asked me to do that and I

835

00:36:51,349 --> 00:36:48,339

just couldn't bring myself to do it

836

00:36:56,640 --> 00:36:51,359

because I feel very strongly about not

837

00:36:58,890 --> 00:36:56,650

debating creation and you know this is

838

00:37:01,020 --> 00:36:58,900

television is television so what they're

839

00:37:03,690 --> 00:37:01,030

going to do is let's you and him fight

840

00:37:07,710 --> 00:37:03,700

yeah they did go to an extent it's it's

841

00:37:12,000 --> 00:37:07,720

the it's the conflict narrative that

842

00:37:14,609 --> 00:37:12,010

they like to present and what I you know

843

00:37:17,730 --> 00:37:14,619

what I suggested to them that what might

844

00:37:19,650 --> 00:37:17,740

be a very interesting program I'm sorry

845

00:37:21,210 --> 00:37:19,660

our your listeners aren't familiar with

846

00:37:23,520 --> 00:37:21,220

what the show is what they did is they

847

00:37:25,230 --> 00:37:23,530

got some conservative Christian students

848

00:37:27,660 --> 00:37:25,240

who were all young earth creationists

849

00:37:30,870 --> 00:37:27,670

and they took them on it to her little

850

00:37:33,690 --> 00:37:30,880

bus yeah and they went to various places

851

00:37:36,359 --> 00:37:33,700

i did also to various scientists and

852

00:37:38,250 --> 00:37:36,369

people young and then I think that

853

00:37:41,430 --> 00:37:38,260

climax was going to grand canyon where

854

00:37:43,470 --> 00:37:41,440

you know it was it done pray through was

855

00:37:45,540 --> 00:37:43,480

that the one who did it oh who was it

856

00:37:47,130 --> 00:37:45,550

i'm trying to remember they got a very

857

00:37:49,559 --> 00:37:47,140

competent scientists to take them

858

00:37:51,450 --> 00:37:49,569

through okok i remember i think it was

859

00:37:53,570 --> 00:37:51,460

done he did it whoever it was did a very

860

00:37:56,480 --> 00:37:53,580

good job i think was done

861

00:38:03,020 --> 00:37:56,490

but you know of course it was here is

862

00:38:04,250 --> 00:38:03,030

the science and if you have your fingers

863

00:38:06,620 --> 00:38:04,260

in your ears you're not going to be

864

00:38:09,890 --> 00:38:06,630

listening to right and so none of these

865

00:38:13,940 --> 00:38:09,900

kids ever really quite absorbed the fact

866

00:38:17,080 --> 00:38:13,950

that they're allegedly scientific views

867

00:38:20,660 --> 00:38:17,090

just don't match up to the data the data

868

00:38:23,600 --> 00:38:20,670

the data clearly refute their view and

869

00:38:25,460 --> 00:38:23,610

it's only if you ignore huge amount of

870

00:38:27,830 --> 00:38:25,470

amounts of data and just cherry-pick the

871

00:38:29,900 --> 00:38:27,840

ones that superficially look like they

872

00:38:32,840 --> 00:38:29,910

support your view that you can you can

873

00:38:35,690 --> 00:38:32,850

hold attitudes like the Grand Canyon

874

00:38:39,850 --> 00:38:35,700

having been formed after Noah's Flood I

875

00:38:42,170 --> 00:38:39,860

mean catastrophic production of the

876

00:38:46,430 --> 00:38:42,180

layers and then the cutting of the

877

00:38:49,130 --> 00:38:46,440

canyon itself and what I suggested to

878

00:38:50,960 --> 00:38:49,140

the to the filmmakers before they filmed

879

00:38:54,440 --> 00:38:50,970

it was it would be much more interesting

880

00:38:56,420 --> 00:38:54,450

to get some Christian Scientists some

881

00:38:59,600 --> 00:38:56,430

scientists who were also Christians but

882

00:39:01,370 --> 00:38:59,610

who accepted evolution so that the

883

00:39:04,880 --> 00:39:01,380

students wouldn't be able to go into

884

00:39:07,070 --> 00:39:04,890

their you there the familiar default oh

885

00:39:09,980 --> 00:39:07,080

well he feels this way cuz he's an

886

00:39:12,950 --> 00:39:09,990

atheist rice yeah because that is their

887

00:39:15,050 --> 00:39:12,960

ultimate defense yes yeah and whereas if

888

00:39:17,060 --> 00:39:15,060

you had and you know I gave him some

889

00:39:21,590 --> 00:39:17,070

suggestions of some scientists who would

890

00:39:25,040 --> 00:39:21,600

be good at explaining why why the

891

00:39:27,880 --> 00:39:25,050

science refuted creation science but who

892

00:39:30,740 --> 00:39:27,890

also would kind of have that extra

893

00:39:32,660 --> 00:39:30,750

component of not being dismissible

894

00:39:34,730 --> 00:39:32,670

because they come from the same faith

895

00:39:36,350 --> 00:39:34,740

tradition as the students I mean you'd

896

00:39:38,150 --> 00:39:36,360

have to get evangelical scientists but I

897

00:39:40,370 --> 00:39:38,160

gave him some names really but at any

898

00:39:42,590 --> 00:39:40,380

rate mmm had any rate they decided to do

899

00:39:44,960 --> 00:39:42,600

you know do it the way they did it so

900

00:39:46,990 --> 00:39:44,970

there you have it but it was it's it's

901
00:39:49,580 --> 00:39:47,000
an interesting program because these

902
00:39:53,330 --> 00:39:49,590
conservative Christian kids were were

903
00:39:57,110 --> 00:39:53,340
very likable and they were you know they

904
00:39:58,860 --> 00:39:57,120
were kids and so they're they're

905
00:40:02,370 --> 00:39:58,870
searching for meaning in life and

906
00:40:04,850 --> 00:40:02,380
you kind of you you you can't help but

907
00:40:08,010 --> 00:40:04,860
be sympathetic to them do you get um

908
00:40:11,040 --> 00:40:08,020
requested often by documentaries and TV

909
00:40:13,460 --> 00:40:11,050
yeah yeah yeah it's not every I mean

910
00:40:16,410 --> 00:40:13,470
there's only so many that are done there

911
00:40:19,110 --> 00:40:16,420
when there's some sort of a public event

912
00:40:21,330 --> 00:40:19,120
like the Dover trial yes that kind of

913
00:40:23,160 --> 00:40:21,340

generated a flurry of your documentary

914

00:40:25,200 --> 00:40:23,170

no aid types of things all right we're

915

00:40:28,500 --> 00:40:25,210

actually fairly careful we will advise

916

00:40:31,560 --> 00:40:28,510

anybody yes and try to steer them right

917

00:40:33,720 --> 00:40:31,570

so to speak so that they mean it has to

918

00:40:35,910 --> 00:40:33,730

be an entertaining show it's television

919

00:40:38,550 --> 00:40:35,920

right if we understand I understand that

920

00:40:40,260 --> 00:40:38,560

very well I guess yes it's not a science

921

00:40:42,750 --> 00:40:40,270

lecture it's got to be something fun

922

00:40:45,480 --> 00:40:42,760

it's got to be something grabbing but if

923

00:40:47,300 --> 00:40:45,490

you can do that but still not distort

924

00:40:50,040 --> 00:40:47,310

the science I consider it a victory and

925

00:40:51,630 --> 00:40:50,050

that's what we try to do we try to we

926

00:40:53,880 --> 00:40:51,640

you know while appreciating the

927

00:40:55,710 --> 00:40:53,890

importance of being entertaining we try

928

00:40:58,200 --> 00:40:55,720

to steer them in ways that would make

929

00:40:59,550 --> 00:40:58,210

this do yeah I mean it doesn't hurt if

930

00:41:01,380 --> 00:40:59,560

you teach people a little bit of science

931

00:41:03,450 --> 00:41:01,390

on the side of course not even if your

932

00:41:05,340 --> 00:41:03,460

goal is to entertain you were on penn &

933

00:41:07,460 --> 00:41:05,350

teller's I went you were I

934

00:41:11,070 --> 00:41:07,470

remember years ago yes as well now as

935

00:41:12,780 --> 00:41:11,080

soon as it yes forever ago yeah I but in

936

00:41:14,460 --> 00:41:12,790

one respect it just seems like the other

937

00:41:16,260 --> 00:41:14,470

days it's shown a this show came out

938

00:41:19,290 --> 00:41:16,270

nothing oh wow what's this but yes it's

939

00:41:21,330 --> 00:41:19,300

a years ago now yeah that's scary is it

940

00:41:22,740 --> 00:41:21,340

still on I do not have to do so I don't

941

00:41:24,210 --> 00:41:22,750

think I've done a new episode for a long

942

00:41:27,810 --> 00:41:24,220

time yeah they did quite a number of

943

00:41:29,760 --> 00:41:27,820

series but they have yes I thought after

944

00:41:32,610 --> 00:41:29,770

we tree watch it now isn't that scary

945

00:41:34,200 --> 00:41:32,620

well I remember they when we hooked

946

00:41:36,360 --> 00:41:34,210

quite a bit in the background on that

947

00:41:38,040 --> 00:41:36,370

yeah and that this was I'm pretty sure

948

00:41:41,370 --> 00:41:38,050

the first season I'm pretty sure you're

949

00:41:43,920 --> 00:41:41,380

right yeah because when we were called

950

00:41:47,250 --> 00:41:43,930

by the producers and they said they

951
00:41:49,080 --> 00:41:47,260
couldn't tell me who it was or who the

952
00:41:50,430 --> 00:41:49,090
hosts were this was all very secret get

953
00:41:55,110 --> 00:41:50,440
really good released yet this is all

954
00:41:56,760 --> 00:41:55,120
very hush-hush and then but you know we

955
00:41:58,500 --> 00:41:56,770
gave them advice of who to interview on

956
00:42:00,390 --> 00:41:58,510
the creationist side and you know where

957
00:42:01,770 --> 00:42:00,400
to find people and would interview on

958
00:42:06,090 --> 00:42:01,780
the evolution side and we kind of help

959
00:42:09,060 --> 00:42:06,100
them structure the the show and then I

960
00:42:10,950 --> 00:42:09,070
got they did go down to the Institute

961
00:42:12,420 --> 00:42:10,960
for Creation Research and the interview

962
00:42:14,070 --> 00:42:12,430
ition morris and you know the usual

963
00:42:18,870 --> 00:42:14,080

crowd down there I think was probably

964

00:42:22,020 --> 00:42:18,880

John Morris and they sent me the script

965

00:42:24,270 --> 00:42:22,030

and or maybe it was before they

966

00:42:25,680 --> 00:42:24,280

interviewed it was before they

967

00:42:26,940 --> 00:42:25,690

interviewed and they wanted me to review

968

00:42:28,440 --> 00:42:26,950

the script to see if they were going to

969

00:42:30,329 --> 00:42:28,450

be asking the right questions which is

970

00:42:32,160 --> 00:42:30,339

exactly what we want people to do

971

00:42:33,810 --> 00:42:32,170

because we can help them yeah we can

972

00:42:38,070 --> 00:42:33,820

help them ask better questions that's a

973

00:42:40,770 --> 00:42:38,080

better show yeah and at the very top it

974

00:42:43,170 --> 00:42:40,780

said penn & teller and I thought ha how

975

00:42:44,820 --> 00:42:43,180

about that and until her must be doing a

976

00:42:46,589 --> 00:42:44,830

TV show but that's all I knew about it

977

00:42:48,120 --> 00:42:46,599

yeah and they didn't have the name of

978

00:42:49,380 --> 00:42:48,130

the show or anything like oh there's

979

00:42:52,200 --> 00:42:49,390

something to do with penet oh that

980

00:42:54,300 --> 00:42:52,210

should be fun but of course the people

981

00:42:56,400 --> 00:42:54,310

who you know the people who interviewed

982

00:42:59,070 --> 00:42:56,410

me was we're not done and Teller they

983

00:43:02,820 --> 00:42:59,080

just sort of cut in dead entire boys the

984

00:43:04,290 --> 00:43:02,830

usual stuff yet yeah so um anywhere was

985

00:43:08,310 --> 00:43:04,300

fun it was fun working with those guys

986

00:43:11,460 --> 00:43:08,320

and it what's really fun is when they

987

00:43:16,050 --> 00:43:11,470

listen to you because we really can help

988

00:43:17,220 --> 00:43:16,060

them better show yeah so yeah well

989

00:43:18,660 --> 00:43:17,230

that's that's the advice of course

990

00:43:20,400 --> 00:43:18,670

whether you're here or not Ginny the

991

00:43:23,579 --> 00:43:20,410

National Center for Center for Science

992

00:43:27,329 --> 00:43:23,589

Education is here to help and advise not

993

00:43:29,640 --> 00:43:27,339

only teachers especially but also you're

994

00:43:32,250 --> 00:43:29,650

a resource for the media absolutely and

995

00:43:35,550 --> 00:43:32,260

we will continue to do that you know

996

00:43:37,200 --> 00:43:35,560

when when I announced that I was

997

00:43:41,579 --> 00:43:37,210

retiring which it was i thinkin may

998

00:43:44,760 --> 00:43:41,589

actually there was a fair amount of

999

00:43:49,140 --> 00:43:44,770

breast meeting oh no what a terrible

1000

00:43:52,740 --> 00:43:49,150

thing oh and you know the thing that

1001
00:43:56,460 --> 00:43:52,750
people have to remember is that NCSE has

1002
00:43:59,750 --> 00:43:56,470
never been just Eugenie Scott it's

1003
00:44:03,660 --> 00:43:59,760
always been a very hardworking and very

1004
00:44:06,780 --> 00:44:03,670
competent staff and now it's better than

1005
00:44:11,190 --> 00:44:06,790
ever and the yes I've helped to shape it

1006
00:44:14,520 --> 00:44:11,200
but the the staff has always been what

1007
00:44:16,680 --> 00:44:14,530
has made NCSE successful there's no way

1008
00:44:19,200 --> 00:44:16,690
that one person could have done all that

1009
00:44:22,200 --> 00:44:19,210
we've accomplished over the last couple

1010
00:44:22,910 --> 00:44:22,210
decades almost three decades but who's

1011
00:44:26,710 --> 00:44:22,920
counting

1012
00:44:29,650 --> 00:44:26,720
so you know people have to remember that

1013
00:44:32,510 --> 00:44:29,660

NCSE is going to be just fine without me

1014

00:44:36,380 --> 00:44:32,520

we'll get a new director who's who will

1015

00:44:41,059 --> 00:44:36,390

be creative and energetic and probably

1016

00:44:44,990 --> 00:44:41,069

better raising money than i am and this

1017

00:44:49,099 --> 00:44:45,000

he or she will do just fine and and

1018

00:44:52,400 --> 00:44:49,109

frankly if it doesn't then i will have

1019

00:44:55,329 --> 00:44:52,410

failed mmm because what my goal is my

1020

00:44:58,250 --> 00:44:55,339

goal is for three or four years from now

1021

00:45:04,849 --> 00:44:58,260

some new staff member shows up at NC SC

1022

00:45:08,599 --> 00:45:04,859

and says genie who an unusual goal

1023

00:45:10,160 --> 00:45:08,609

Janice manual well i'll be i am when you

1024

00:45:11,930 --> 00:45:10,170

used to come when i come knocking on the

1025

00:45:13,640 --> 00:45:11,940

door it will be sad not to come back to

1026

00:45:15,140 --> 00:45:13,650

your office and sit down and have a cup

1027

00:45:17,059 --> 00:45:15,150

of coffee and yeah but you know where I

1028

00:45:19,400 --> 00:45:17,069

man I do I've got your number genius

1029

00:45:21,680 --> 00:45:19,410

good and I'm making I have made your

1030

00:45:23,630 --> 00:45:21,690

coming over for dinner oh yes yeah I had

1031

00:45:25,970 --> 00:45:23,640

I got up early this morning and I went

1032

00:45:28,609 --> 00:45:25,980

out to my backyard and I picked lemons

1033

00:45:30,890 --> 00:45:28,619

for my Meyer lemon tree I made you a

1034

00:45:32,990 --> 00:45:30,900

lemon meringue huh it's going to be

1035

00:45:35,900 --> 00:45:33,000

tasty now you are folks there's perks to

1036

00:45:45,810 --> 00:45:35,910

this job I tell you genius got the Gary

1037

00:45:51,640 --> 00:45:49,450

hello Skepta potties dr. Willis here

1038

00:45:53,710 --> 00:45:51,650

from RI odds with some highlights of the

1039

00:45:56,050 --> 00:45:53,720

news in science for this past week and

1040

00:45:59,290 --> 00:45:56,060

as always news from the world of science

1041

00:46:00,850 --> 00:45:59,300

has come thick and fast a Swedish study

1042

00:46:03,220 --> 00:46:00,860

has found that children with high

1043

00:46:05,740 --> 00:46:03,230

proportions of polyunsaturated fatty

1044

00:46:08,020 --> 00:46:05,750

acids in cord blood at Birth are more

1045

00:46:10,630 --> 00:46:08,030

likely to develop respiratory and skin

1046

00:46:13,150 --> 00:46:10,640

allergies in their early teens the fatty

1047

00:46:15,850 --> 00:46:13,160

acids in question were omega-3 and

1048

00:46:17,950 --> 00:46:15,860

omega-6 but the mechanism by which these

1049

00:46:20,620 --> 00:46:17,960

lipids might affect allergy development

1050

00:46:22,810 --> 00:46:20,630

remains unknown other researchers in

1051

00:46:25,000 --> 00:46:22,820

this area urge care when interpreting

1052

00:46:27,910 --> 00:46:25,010

this study and have expressed skepticism

1053

00:46:29,860 --> 00:46:27,920

about its methodology a study in The

1054

00:46:32,920 --> 00:46:29,870

Lancet has found that prolonged exposure

1055

00:46:35,380 --> 00:46:32,930

to particulate air pollution increases

1056

00:46:38,800 --> 00:46:35,390

the risk of lung cancer even at levels

1057

00:46:40,690 --> 00:46:38,810

below European Union limits this is one

1058

00:46:43,030 --> 00:46:40,700

of the largest studies of its kind and

1059

00:46:45,430 --> 00:46:43,040

includes data from Australia the study

1060

00:46:47,800 --> 00:46:45,440

also showed that short-term exposure to

1061

00:46:49,750 --> 00:46:47,810

most major air pollutants appears to

1062

00:46:52,500 --> 00:46:49,760

increase the risk of being hospitalized

1063

00:46:54,790 --> 00:46:52,510

for and dying from heart failure

1064

00:46:57,130 --> 00:46:54,800

Australia's chief scientist Professor

1065

00:46:59,320 --> 00:46:57,140

Ian Chubb has identified antibiotic

1066

00:47:02,110 --> 00:46:59,330

resistance as an important scientific

1067

00:47:04,000 --> 00:47:02,120

issue for the Australian public he says

1068

00:47:05,350 --> 00:47:04,010

it has the potential to become one of

1069

00:47:08,170 --> 00:47:05,360

the world's biggest public health

1070

00:47:10,090 --> 00:47:08,180

challenges a new paper released by the

1071

00:47:12,550 --> 00:47:10,100

office of the chief scientist this week

1072

00:47:14,950 --> 00:47:12,560

says that urgent action must be taken to

1073

00:47:18,430 --> 00:47:14,960

address the rising threat of antibiotic

1074

00:47:20,980 --> 00:47:18,440

resistance good bacteria from poo may

1075

00:47:23,140 --> 00:47:20,990

help an inflamed tummy an article

1076
00:47:25,920 --> 00:47:23,150
published in Nature this week identified

1077
00:47:29,230 --> 00:47:25,930
a combination of 17 human-derived

1078
00:47:31,540 --> 00:47:29,240
Clostridium that reduce the severity of

1079
00:47:34,240 --> 00:47:31,550
allergic and inflammatory conditions in

1080
00:47:36,520 --> 00:47:34,250
the guts of mice it suggested that these

1081
00:47:38,980 --> 00:47:36,530
strains may be useful candidates for the

1082
00:47:41,710 --> 00:47:38,990
future development of oral bacterial or

1083
00:47:44,200 --> 00:47:41,720
probiotic therapeutics to treat human

1084
00:47:46,960 --> 00:47:44,210
inflammatory disorders and finally this

1085
00:47:49,870 --> 00:47:46,970
week does a child's bedtime affect their

1086
00:47:51,970 --> 00:47:49,880
brain power a UK study found that going

1087
00:47:54,490 --> 00:47:51,980
to bed at different times every night

1088
00:47:57,000 --> 00:47:54,500

out early childhood seems to curb a

1089

00:47:59,440 --> 00:47:57,010

child's brain power they looked at over

1090

00:48:01,480 --> 00:47:59,450

11,000 seven year olds and found that

1091

00:48:04,330 --> 00:48:01,490

those with irregular bedtimes at age

1092

00:48:07,030 --> 00:48:04,340

three had lower scores in reading maths

1093

00:48:09,400 --> 00:48:07,040

and spatial awareness this applied to

1094

00:48:10,960 --> 00:48:09,410

both boys and girls suggesting that

1095

00:48:12,700 --> 00:48:10,970

around the age of three could be a

1096

00:48:14,950 --> 00:48:12,710

sensitive period for cognitive

1097

00:48:17,650 --> 00:48:14,960

development more information on these

1098

00:48:19,960 --> 00:48:17,660

and other science news stories including

1099

00:48:23,740 --> 00:48:19,970

the original papers where possible can

1100

00:48:27,400 --> 00:48:23,750

be found on the Arias website are I aus

1101
00:48:30,160 --> 00:48:27,410
org dot a you and to wrap up this week's

1102
00:48:31,900 --> 00:48:30,170
bulletin some recent science history did

1103
00:48:34,270 --> 00:48:31,910
you realize that it's been one year

1104
00:48:36,640 --> 00:48:34,280
since the announcement of the discovery

1105
00:48:39,820 --> 00:48:36,650
of the Higgs boson what have we learnt

1106
00:48:42,130 --> 00:48:39,830
in the last 365 days you may well ask

1107
00:48:44,830 --> 00:48:42,140
and what's so important about a Higgs

1108
00:48:47,500 --> 00:48:44,840
boson anyway find out more in a guest

1109
00:48:50,230 --> 00:48:47,510
blog on the are isles website that's our

1110
00:48:52,090 --> 00:48:50,240
oils org do i you that's it from me for

1111
00:48:54,280 --> 00:48:52,100
this week and remember it's our

1112
00:48:57,540 --> 00:48:54,290
obligation not to believe in the

1113
00:49:02,340 --> 00:49:00,210

hi I'm Finn and I'm Rebecca and where

1114

00:49:04,110 --> 00:49:02,350

the skipper cons skipper Collins is an

1115

00:49:05,790 --> 00:49:04,120

Irish podcast by the Dublin skeptics

1116

00:49:07,380 --> 00:49:05,800

society it takes a conversational

1117

00:49:08,610 --> 00:49:07,390

Reverend look at science news and

1118

00:49:12,120 --> 00:49:08,620

skeptical topics from an Irish

1119

00:49:15,579 --> 00:49:12,130

perspective you can find us at WWDC

1120

00:49:15,589 --> 00:49:27,220

spirit is strong

1121

00:49:31,220 --> 00:49:29,720

thank you for listening to the skeptic

1122

00:49:34,040 --> 00:49:31,230

zone while I'm still here at the end of

1123

00:49:35,630 --> 00:49:34,050

this massive hallway at the amazing

1124

00:49:37,610 --> 00:49:35,640

meeting there's a session in progress

1125

00:49:39,860 --> 00:49:37,620

right now so it's a little bit quiet out

1126
00:49:41,930 --> 00:49:39,870
here but soon I'm sure they'll be hordes

1127
00:49:45,530 --> 00:49:41,940
of people walking past the Australian

1128
00:49:48,140 --> 00:49:45,540
skeptics table now before I go before I

1129
00:49:50,300 --> 00:49:48,150
go this week something to look out for

1130
00:49:52,130 --> 00:49:50,310
it to go to and there'll be a link in

1131
00:49:55,370 --> 00:49:52,140
the on the web page to show notes for

1132
00:49:57,200 --> 00:49:55,380
this episode the ABC science show

1133
00:50:00,580 --> 00:49:57,210
catalysts in Australia in the last week

1134
00:50:04,880 --> 00:50:00,590
ran a program very critical indeed of

1135
00:50:07,730 --> 00:50:04,890
chiropractic and it was quite a report

1136
00:50:10,040 --> 00:50:07,740
quite an interesting report if you look

1137
00:50:13,730 --> 00:50:10,050
at the show notes for this week or if

1138
00:50:15,230 --> 00:50:13,740

you google catalyst ABC television or if

1139

00:50:18,740 --> 00:50:15,240

you know the website you'll certainly

1140

00:50:21,860 --> 00:50:18,750

find it and I can sincerely recommend

1141

00:50:23,750 --> 00:50:21,870

you invest half an hour and watch that

1142

00:50:26,150 --> 00:50:23,760

report it's not geo locked so you can

1143

00:50:28,970 --> 00:50:26,160

see that online video all around the

1144

00:50:31,220 --> 00:50:28,980

world so that's catalyst program from

1145

00:50:34,820 --> 00:50:31,230

ABC television in Australia and their

1146

00:50:36,350 --> 00:50:34,830

special report on chiropractic well

1147

00:50:37,580 --> 00:50:36,360

coming up over the next few weeks I hope

1148

00:50:39,740 --> 00:50:37,590

to bring you lots of interesting

1149

00:50:42,560 --> 00:50:39,750

insights and interviews from the amazing

1150

00:50:44,720 --> 00:50:42,570

meeting here in Las Vegas but until then

1151

00:50:47,060 --> 00:50:44,730

I better put this recording equipment

1152

00:50:49,970 --> 00:50:47,070

away and set up my table with their

1153

00:50:52,640 --> 00:50:49,980

copies of the skeptic magazine and talk

1154

00:50:54,380 --> 00:50:52,650

to people for the rest of the day and uh

1155

00:50:57,110 --> 00:50:54,390

next week this is Richard Saunders

1156

00:51:01,829 --> 00:50:57,120

signing off from the amazing meeting in

1157

00:51:09,430 --> 00:51:04,269

you've been listening to the skeptics

1158

00:51:13,269 --> 00:51:09,440

are visit our website at www.skeptics.org on