

**Show 461**

**THE  
SKEPTIC  
ZONE  
PODCAST**

[www.skepticzone.tv](http://www.skepticzone.tv)

**20 August 2017**

**Evan Bernstein from the Skeptics Guide to the Universe joins us to talk about the upcoming eclipse**

**Brew Ha Ha: Science in less time than it takes to order a coffee - With Kelly Wong**

**The Raw Skeptic Report... with Heidi Robertson - A cautionary message for us all about the dangers of not vaccinating.**

**Maynard at Sydney Science Festival, live from the Powerhouse Museum - Dr Jodi Rowley and FROGS!**

**The Skeptic Zone Podcast  
Show 461 - 20 August 2017**



**Dr Jodi Rowley**

1  
00:00:09,110 --> 00:00:05,920

[Music]

2  
00:00:11,830 --> 00:00:09,120

welcome to the skeptic zone the podcast

3  
00:00:13,910 --> 00:00:11,840

from Australia for science and reason

4  
00:00:16,840 --> 00:00:13,920

[Music]

5  
00:00:22,609 --> 00:00:16,850

[Applause]

6  
00:00:25,230 --> 00:00:22,619

[Music]

7  
00:00:29,130 --> 00:00:25,240

yes it's the skeptic zone podcast

8  
00:00:32,370 --> 00:00:29,140

episode number 461 for the 20th of

9  
00:00:35,850 --> 00:00:32,380

August 2017 richardsaunders here with

10  
00:00:38,430 --> 00:00:35,860

you from a windy no windy windy sydney

11  
00:00:39,450 --> 00:00:38,440

australia in fact we had just over the

12  
00:00:43,200 --> 00:00:39,460

last couple of days we had

13  
00:00:44,970 --> 00:00:43,210

record-breaking gale force winds blowing

14

00:00:47,910 --> 00:00:44,980

out windows and all sorts of things in

15

00:00:50,939 --> 00:00:47,920

sydney good weather for flying kites or

16

00:00:53,940 --> 00:00:50,949

not I'm not sure cool and crisp and

17

00:00:55,650 --> 00:00:53,950

windy in Sydney Australia but just

18

00:00:57,870 --> 00:00:55,660

between you and me folks I would rather

19

00:01:00,420 --> 00:00:57,880

not be in Sydney Australia right now I

20

00:01:02,790 --> 00:01:00,430

would rather be with my old mate Evan

21

00:01:06,590 --> 00:01:02,800

Bernstein from the skeptics guide to the

22

00:01:10,290 --> 00:01:06,600

universe he is as I record this

23

00:01:14,190 --> 00:01:10,300

introduction he is dead smack bang

24

00:01:17,340 --> 00:01:14,200

Centre in the path of totality for the

25

00:01:19,469 --> 00:01:17,350

upcoming solar eclipse he's travelled

26  
00:01:23,790 --> 00:01:19,479  
all the way from Connecticut to Oregon

27  
00:01:26,910 --> 00:01:23,800  
and he has a front row seat we're going

28  
00:01:28,880 --> 00:01:26,920  
to catch up with Evan in a moment and

29  
00:01:31,560 --> 00:01:28,890  
interview I recorded a few days ago

30  
00:01:34,800 --> 00:01:31,570  
where he will tell us about the

31  
00:01:37,080 --> 00:01:34,810  
excitement that this eclipse is

32  
00:01:39,719 --> 00:01:37,090  
generating and a bit more about the

33  
00:01:43,880 --> 00:01:39,729  
science so to kick off the skeptic zone

34  
00:01:46,950 --> 00:01:43,890  
total eclipse with evan bernstein and

35  
00:01:50,880 --> 00:01:46,960  
evan reminds us a bit later on that it's

36  
00:01:53,399 --> 00:01:50,890  
ten years today in fact well yesterday

37  
00:01:55,560 --> 00:01:53,409  
as far as Australia is concerned but

38  
00:01:57,870 --> 00:01:55,570

today in the United States since the

39

00:02:00,270 --> 00:01:57,880

passing of perry deangelis one of the

40

00:02:01,730 --> 00:02:00,280

founding members of the skeptics guide

41

00:02:04,289 --> 00:02:01,740

to the universe

42

00:02:06,770 --> 00:02:04,299

following that it's brouhaha science

43

00:02:10,080 --> 00:02:06,780

this week with Kelly Wong talking about

44

00:02:11,610 --> 00:02:10,090

renewable energy versus old-fashioned

45

00:02:14,789 --> 00:02:11,620

energy I guess we could print that way

46

00:02:16,170 --> 00:02:14,799

and she's wondering which energy will

47

00:02:18,569 --> 00:02:16,180

win out in the end

48

00:02:21,300 --> 00:02:18,579

then it's the Ross kept ik Heidi

49

00:02:23,910 --> 00:02:21,310

Robertson with reports she recorded some

50

00:02:24,509 --> 00:02:23,920

weeks ago at the starstuff astronomy

51  
00:02:27,660 --> 00:02:24,519  
weekend

52  
00:02:29,699 --> 00:02:27,670  
she went to up in Byron Bay one of the

53  
00:02:31,860 --> 00:02:29,709  
people she met was a man called John

54  
00:02:33,900 --> 00:02:31,870  
heard a very touching story to tell

55  
00:02:36,810 --> 00:02:33,910  
about his

56  
00:02:39,600 --> 00:02:36,820  
late son and it really is a caution to

57  
00:02:41,730 --> 00:02:39,610  
us all about the dangers of in fact not

58  
00:02:44,130 --> 00:02:41,740  
vaccinating I think you'll find this

59  
00:02:46,080 --> 00:02:44,140  
story very moving and also we'll play a

60  
00:02:48,450 --> 00:02:46,090  
little bit of the government the federal

61  
00:02:51,150 --> 00:02:48,460  
government's new campaign to encourage

62  
00:02:54,720 --> 00:02:51,160  
parents to vaccinate men to round off

63  
00:02:57,570 --> 00:02:54,730

the show Maynard's spooky action Maynard

64

00:03:00,380 --> 00:02:57,580

and I went to the launch of the Sydney

65

00:03:03,230 --> 00:03:00,390

Science Festival which was at the

66

00:03:05,430 --> 00:03:03,240

launched from the powerhouse museum and

67

00:03:07,740 --> 00:03:05,440

what a fabulous night that was

68

00:03:10,920 --> 00:03:07,750

scientists everywhere people everywhere

69

00:03:13,980 --> 00:03:10,930

lots to see lots to do lots of people to

70

00:03:16,920 --> 00:03:13,990

chat to may not even interviews a snake

71

00:03:19,170 --> 00:03:16,930

we're all sort of he interviews a snake

72

00:03:21,960 --> 00:03:19,180

Wrangler from the Taronga Park Zoo here

73

00:03:25,860 --> 00:03:21,970

in Sydney we also chat to scientists

74

00:03:27,840 --> 00:03:25,870

there on the spot on the desks talking

75

00:03:29,910 --> 00:03:27,850

to the general public including the

76

00:03:32,130 --> 00:03:29,920

fabulous dr. Jody rally from the

77

00:03:36,600 --> 00:03:32,140

Australian Museum one of Australia's

78

00:03:38,280 --> 00:03:36,610

leading experts in the frogs lots of

79

00:03:40,260 --> 00:03:38,290

interviews coming up from the launch of

80

00:03:42,840 --> 00:03:40,270

the Science Festival at the Powerhouse

81

00:03:45,510 --> 00:03:42,850

Museum and a big THANK YOU to our dear

82

00:03:47,970 --> 00:03:45,520

friend Frank Healy who helped line up

83

00:03:49,650 --> 00:03:47,980

some of these interviews and helped us

84

00:03:51,990 --> 00:03:49,660

out on the night Thank You Frankie I

85

00:03:54,830 --> 00:03:52,000

know she listens to the skeptics own

86

00:03:58,010 --> 00:03:54,840

every week what she says she does hmm

87

00:04:01,980 --> 00:03:58,020

links to everything in the show notes as

88

00:04:03,630 --> 00:04:01,990

normal and that's at skeptic zone TV or

89

00:04:06,449 --> 00:04:03,640

in fact if you're listening to this on

90

00:04:09,780 --> 00:04:06,459

an iPhone and I think if you tap the

91

00:04:11,340 --> 00:04:09,790

image you'll get the show notes I'm not

92

00:04:13,350 --> 00:04:11,350

sure how that works on Android probably

93

00:04:16,229 --> 00:04:13,360

more or less the same but anyway they

94

00:04:19,050 --> 00:04:16,239

are available and in fact the show notes

95

00:04:22,050 --> 00:04:19,060

are also available if you are listening

96

00:04:23,700 --> 00:04:22,060

to this episode via YouTube in the

97

00:04:25,620 --> 00:04:23,710

description you can see all the show

98

00:04:28,890 --> 00:04:25,630

notes with the accompanying time codes

99

00:04:31,290 --> 00:04:28,900

for every segment please listen at the

100

00:04:34,530 --> 00:04:31,300

end of this episode for an important

101  
00:04:36,690 --> 00:04:34,540  
announcement from me our but in the

102  
00:04:40,080 --> 00:04:36,700  
meantime it's time for me to run

103  
00:04:42,450 --> 00:04:40,090  
downstairs where are those cats the door

104  
00:04:44,700 --> 00:04:42,460  
shut you see sometimes little pores come

105  
00:04:46,380 --> 00:04:44,710  
under the door not today there must be

106  
00:04:47,310 --> 00:04:46,390  
downstairs waiting for their breakfast I

107  
00:04:49,050 --> 00:04:47,320  
think anyway

108  
00:04:51,420 --> 00:04:49,060  
I'm gonna run downstairs maybe feed the

109  
00:04:57,540 --> 00:04:51,430  
cats they deserve it then I'm going to

110  
00:05:00,990 --> 00:04:57,550  
have some eggs poached eggs yeah

111  
00:05:05,850 --> 00:05:01,000  
poached eggs on toast with a little bit

112  
00:05:09,720 --> 00:05:05,860  
of salt and maybe some avocado hmm and a

113  
00:05:11,760 --> 00:05:09,730

coffee okay that sounds pretty good to

114

00:05:13,960 --> 00:05:11,770

me while I'm enjoying all that I hope

115

00:05:29,840 --> 00:05:13,970

you enjoy the skeptic zone

116

00:05:32,670 --> 00:05:29,850

[Music]

117

00:05:34,800 --> 00:05:32,680

joining me now from beautiful and I mean

118

00:05:36,660 --> 00:05:34,810

beautiful Connecticut in the United

119

00:05:38,250 --> 00:05:36,670

States it's my old friend from the

120

00:05:41,940 --> 00:05:38,260

skeptics guide to the universe

121

00:05:43,890 --> 00:05:41,950

Evan Bernstein I Richard really nice to

122

00:05:45,660 --> 00:05:43,900

quickly catch up with you quickly catch

123

00:05:48,030 --> 00:05:45,670

up with you because it's very exciting

124

00:05:49,470 --> 00:05:48,040

it's even exciting in this part of the

125

00:05:52,110 --> 00:05:49,480

world and we're not going to see it

126  
00:05:54,840 --> 00:05:52,120  
ourselves the wonderful incredible

127  
00:05:58,050 --> 00:05:54,850  
eclipse what can you briefly tell our

128  
00:06:00,600 --> 00:05:58,060  
listeners about that it's coming up on

129  
00:06:04,740 --> 00:06:00,610  
well at least on in the United States

130  
00:06:07,770 --> 00:06:04,750  
time zones August 21st 2017 so we're

131  
00:06:10,050 --> 00:06:07,780  
just a measly five days away from it

132  
00:06:12,600 --> 00:06:10,060  
happening and this is eclipse is going

133  
00:06:14,790 --> 00:06:12,610  
to go the stretch of the United States

134  
00:06:16,200 --> 00:06:14,800  
from coast to coast Pacific coast to the

135  
00:06:18,780 --> 00:06:16,210  
Atlantic coast

136  
00:06:20,730 --> 00:06:18,790  
12 states will have a view 12 million

137  
00:06:23,190 --> 00:06:20,740  
people living in the in the path of

138  
00:06:24,900 --> 00:06:23,200

totality of the Eclipse the rest of the

139

00:06:29,010 --> 00:06:24,910

country will be entertained by a

140

00:06:31,290 --> 00:06:29,020

beautiful partial solar eclipse and the

141

00:06:32,640 --> 00:06:31,300

highest estimates I've heard are as many

142

00:06:34,800 --> 00:06:32,650

as thirty million people are going to be

143

00:06:38,400 --> 00:06:34,810

traveling and making arrangements to uh

144

00:06:41,100 --> 00:06:38,410

to see this one that's mind-blowing I

145

00:06:43,890 --> 00:06:41,110

mean we've heard about solar eclipses

146

00:06:46,350 --> 00:06:43,900

and every year in fact I think oh no

147

00:06:49,860 --> 00:06:46,360

maybe not every year but for quite quite

148

00:06:52,500 --> 00:06:49,870

regularly throughout a given century the

149

00:06:55,560 --> 00:06:52,510

world will experience solar eclipses but

150

00:06:58,440 --> 00:06:55,570

this sort of I've noticed all over the

151  
00:07:00,660 --> 00:06:58,450  
planet aren't they absolutely they are

152  
00:07:01,860 --> 00:07:00,670  
in our planet is mostly water so a lot

153  
00:07:04,260 --> 00:07:01,870  
of times that these solar eclipses

154  
00:07:05,700 --> 00:07:04,270  
happen they happen over a body of water

155  
00:07:07,680 --> 00:07:05,710  
so right there you can wipe out sort of

156  
00:07:09,960 --> 00:07:07,690  
two-thirds of them from people or large

157  
00:07:13,050 --> 00:07:09,970  
amounts of people being able to be

158  
00:07:15,420 --> 00:07:13,060  
witnessed to them so and they only

159  
00:07:16,650 --> 00:07:15,430  
happen at the same point on in any given

160  
00:07:18,000 --> 00:07:16,660  
point in the earth once every three

161  
00:07:21,650 --> 00:07:18,010  
hundred seventy five years I looked up

162  
00:07:24,360 --> 00:07:21,660  
that's just fascinating yep yeah that's

163  
00:07:25,980 --> 00:07:24,370

so this one's this one's special because

164

00:07:29,190 --> 00:07:25,990

a lot of people are going to have access

165

00:07:31,530 --> 00:07:29,200

to this one and it's also interesting

166

00:07:32,279 --> 00:07:31,540

because you're getting a lot of people

167

00:07:35,790 --> 00:07:32,289

into a very

168

00:07:37,889 --> 00:07:35,800

or small space of in the United States

169

00:07:40,019 --> 00:07:37,899

it's only 100 kilometers long this swath

170

00:07:41,459 --> 00:07:40,029

that's going across the country and if

171

00:07:43,829 --> 00:07:41,469

30 million people are going to try to

172

00:07:45,779 --> 00:07:43,839

get to that line of totality boy that's

173

00:07:48,570 --> 00:07:45,789

something we've really never experienced

174

00:07:50,189 --> 00:07:48,580

or seen before ever so this isn't this

175

00:07:53,339 --> 00:07:50,199

will be very interesting just to see how

176

00:07:56,339 --> 00:07:53,349

it all pans out now a couple of things I

177

00:07:58,260 --> 00:07:56,349

will say you have every day now since I

178

00:08:00,450 --> 00:07:58,270

was at the beginning of the month you've

179

00:08:04,350 --> 00:08:00,460

had a little two three four or five

180

00:08:06,329 --> 00:08:04,360

minute web video on different aspects of

181

00:08:08,459 --> 00:08:06,339

the upcoming solar eclipse and what it

182

00:08:11,159 --> 00:08:08,469

what an interesting little exercise

183

00:08:12,989 --> 00:08:11,169

that's been it's like bite sized little

184

00:08:16,079 --> 00:08:12,999

bits of science every day with Evan I

185

00:08:18,540 --> 00:08:16,089

have really enjoyed that and well done

186

00:08:20,549 --> 00:08:18,550

for actually thinking about that and

187

00:08:21,959 --> 00:08:20,559

doing it well thanks Richard I

188

00:08:24,449 --> 00:08:21,969

appreciate it and for you know the

189

00:08:26,429 --> 00:08:24,459

people who do follow me my page my my

190

00:08:27,869 --> 00:08:26,439

personal page on Facebook what I wanted

191

00:08:29,639 --> 00:08:27,879

to do is put together sort of three

192

00:08:32,430 --> 00:08:29,649

weeks of build up up to the solar

193

00:08:35,339 --> 00:08:32,440

eclipse because it's been on my mind

194

00:08:37,110 --> 00:08:35,349

largely for 38 years just about most

195

00:08:38,790 --> 00:08:37,120

most of my life since since I was a

196

00:08:40,949 --> 00:08:38,800

nine-year-old boy and it's really my was

197

00:08:42,899 --> 00:08:40,959

my first foray into science so this is

198

00:08:44,639 --> 00:08:42,909

really the culmination of a very long

199

00:08:46,800 --> 00:08:44,649

journey for me in which I've paid close

200

00:08:48,480 --> 00:08:46,810

attention to this actually and I wanted

201  
00:08:50,610 --> 00:08:48,490  
to sort of put together a video diary so

202  
00:08:52,139 --> 00:08:50,620  
that people could sort of experience how

203  
00:08:53,340 --> 00:08:52,149  
I'm not only feeling about things but

204  
00:08:55,350 --> 00:08:53,350  
also bring to them some interesting

205  
00:08:57,600 --> 00:08:55,360  
facts a little bit of history and

206  
00:08:59,670 --> 00:08:57,610  
certainly some science pertaining to the

207  
00:09:01,590 --> 00:08:59,680  
solar eclipse which is what has me so

208  
00:09:05,189 --> 00:09:01,600  
excited I'm not surprised

209  
00:09:08,939 --> 00:09:05,199  
people who I have spoken to recently who

210  
00:09:11,840 --> 00:09:08,949  
have seen one I've said it's just the

211  
00:09:15,179 --> 00:09:11,850  
most incredible or inspiring experience

212  
00:09:18,240 --> 00:09:15,189  
now let me let me ask you something and

213  
00:09:19,620 --> 00:09:18,250

maybe you can be of great benefit to our

214

00:09:21,809 --> 00:09:19,630

listeners in the United States who are

215

00:09:24,120 --> 00:09:21,819

going to see this I am a little bit

216

00:09:26,100 --> 00:09:24,130

concerned I must say that so many people

217

00:09:28,410 --> 00:09:26,110

will be rushing to see this they may be

218

00:09:30,870 --> 00:09:28,420

a little bit unprepared what are your

219

00:09:33,689 --> 00:09:30,880

top safety tips because there is a

220

00:09:35,460 --> 00:09:33,699

danger isn't there there is a danger

221

00:09:36,720 --> 00:09:35,470

with looking at the Sun anytime you're

222

00:09:39,120 --> 00:09:36,730

looking at the Sun let's not forget

223

00:09:41,129 --> 00:09:39,130

exactly what this says you're staring at

224

00:09:43,290 --> 00:09:41,139

you're gonna be looking at the Sun and

225

00:09:44,910 --> 00:09:43,300

we all know that that's very very bad

226

00:09:46,310 --> 00:09:44,920

for us can cause a lot of damage so

227

00:09:47,840 --> 00:09:46,320

think about that for

228

00:09:49,010 --> 00:09:47,850

and for most any time that there's an

229

00:09:49,580 --> 00:09:49,020

eclipse because that's really what's

230

00:09:52,610 --> 00:09:49,590

happening

231

00:09:55,130 --> 00:09:52,620

you must have approved I wear eye

232

00:09:57,020 --> 00:09:55,140

protection and there are plenty of

233

00:09:58,700 --> 00:09:57,030

places online I don't I don't have those

234

00:10:00,590 --> 00:09:58,710

directly at my fingertips you can go to

235

00:10:02,660 --> 00:10:00,600

NASA's website I know they've got it and

236

00:10:04,100 --> 00:10:02,670

they will tell you exactly how to check

237

00:10:06,740 --> 00:10:04,110

and make sure that your eyewear is

238

00:10:09,170 --> 00:10:06,750

correct because there is concern that

239

00:10:11,510 --> 00:10:09,180

some substandard eye I protect you

240

00:10:14,270 --> 00:10:11,520

has gotten out there to people certainly

241

00:10:16,130 --> 00:10:14,280

people who maybe purchased glasses a

242

00:10:19,400 --> 00:10:16,140

while back even as long as a year ago

243

00:10:21,230 --> 00:10:19,410

and not those companies were not 100% up

244

00:10:23,540 --> 00:10:21,240

to speed on the specifications that

245

00:10:25,010 --> 00:10:23,550

needed to be done for this eclipse so

246

00:10:26,780 --> 00:10:25,020

especially if you've got the older

247

00:10:28,790 --> 00:10:26,790

glasses double-check and make sure that

248

00:10:30,890 --> 00:10:28,800

it's the right coating and again you can

249

00:10:32,270 --> 00:10:30,900

go to NASA's website along with and many

250

00:10:34,280 --> 00:10:32,280

other places on the web it's a very

251  
00:10:36,560 --> 00:10:34,290  
quick search to validate your your

252  
00:10:39,470 --> 00:10:36,570  
eyewear plenty of other instructional

253  
00:10:42,080 --> 00:10:39,480  
videos also YouTube and elsewhere if you

254  
00:10:43,400 --> 00:10:42,090  
want to protect your binoculars if

255  
00:10:44,120 --> 00:10:43,410  
you're gonna be using binoculars or even

256  
00:10:46,580 --> 00:10:44,130  
telescopes

257  
00:10:48,110 --> 00:10:46,590  
to watch the Eclipse plenty of good

258  
00:10:50,060 --> 00:10:48,120  
information out there and how to how to

259  
00:10:51,380 --> 00:10:50,070  
make sure your filters are correct or if

260  
00:10:53,030 --> 00:10:51,390  
you're gonna be making your own filters

261  
00:10:55,880 --> 00:10:53,040  
how to make sure everything is safely

262  
00:10:58,700 --> 00:10:55,890  
secured you must have eye protection at

263  
00:11:01,310 --> 00:10:58,710

all times all times with one exception

264

00:11:02,810 --> 00:11:01,320

this is it mmm you again I'll wanna

265

00:11:04,880 --> 00:11:02,820

drive this home you've got to have your

266

00:11:07,880 --> 00:11:04,890

eye protection on the whole time with

267

00:11:10,490 --> 00:11:07,890

one exception it's that two to

268

00:11:12,830 --> 00:11:10,500

two-and-a-half minutes of pure totality

269

00:11:15,410 --> 00:11:12,840

if you are in that line of totality if

270

00:11:17,780 --> 00:11:15,420

you were in that 100 kilometer band

271

00:11:20,030 --> 00:11:17,790

along the United States then you can

272

00:11:21,920 --> 00:11:20,040

remove your eyewear but just for those

273

00:11:25,820 --> 00:11:21,930

moments that you're that it's in perfect

274

00:11:29,090 --> 00:11:25,830

perfect totality other otherwise glasses

275

00:11:32,450 --> 00:11:29,100

on you're going to be and millions of

276

00:11:35,690 --> 00:11:32,460

the people will experience about roughly

277

00:11:38,600 --> 00:11:35,700

two minutes of totality where I'm gonna

278

00:11:41,090 --> 00:11:38,610

be in Oregon it's two minutes and the at

279

00:11:43,250 --> 00:11:41,100

it's at its longest duration which will

280

00:11:45,440 --> 00:11:43,260

be in Kentucky Tennessee around the

281

00:11:47,750 --> 00:11:45,450

around the middle of the country two

282

00:11:49,370 --> 00:11:47,760

minutes and forty seconds it has to do

283

00:11:50,990 --> 00:11:49,380

with the angle of the moon and then

284

00:11:52,940 --> 00:11:51,000

certainly everything that and the

285

00:11:54,500 --> 00:11:52,950

rotation of the earth at that time which

286

00:11:57,710 --> 00:11:54,510

is why it varies a little bit along the

287

00:12:00,079 --> 00:11:57,720

path which is normal which is considered

288

00:12:02,299 --> 00:12:00,089

on the short side for solar eclipse

289

00:12:05,509 --> 00:12:02,309

because some solar eclipses can be as

290

00:12:07,509 --> 00:12:05,519

long as seven minutes Wow in in duration

291

00:12:10,129 --> 00:12:07,519

yeah those are very impressive ones but

292

00:12:11,929 --> 00:12:10,139

you know total solar eclipses are rare

293

00:12:13,610 --> 00:12:11,939

enough where people get to see them I'll

294

00:12:16,160 --> 00:12:13,620

take two minutes you know I'm gonna take

295

00:12:18,079 --> 00:12:16,170

one minute I would be equally excited so

296

00:12:19,819 --> 00:12:18,089

I really can't wait well the exciting

297

00:12:23,600 --> 00:12:19,829

news for people in my neck of the woods

298

00:12:25,309 --> 00:12:23,610

in Sydney Australia is I think in the

299

00:12:29,299 --> 00:12:25,319

next decade I was looking at a website

300

00:12:33,040 --> 00:12:29,309

earlier there is a total eclipse going

301  
00:12:35,480 --> 00:12:33,050  
to go right over Sydney perfect yeah

302  
00:12:39,319 --> 00:12:35,490  
send me the date I will be there all

303  
00:12:40,819 --> 00:12:39,329  
right wheezing I'm not too old well I

304  
00:12:42,379 --> 00:12:40,829  
was just saying you and I will be both

305  
00:12:44,689 --> 00:12:42,389  
retired we'll be sitting there without

306  
00:12:47,980 --> 00:12:44,699  
in our armchairs you know somewhere in

307  
00:12:51,170 --> 00:12:47,990  
Sydney with a couple of drinks it's just

308  
00:12:53,179 --> 00:12:51,180  
look that one up folks but yes sometime

309  
00:12:55,400 --> 00:12:53,189  
in I think in the 20s and the later day

310  
00:12:55,819 --> 00:12:55,410  
in the 2020s there'll be one right over

311  
00:12:58,189 --> 00:12:55,829  
Sydney

312  
00:12:58,970 --> 00:12:58,199  
Evan what a pleasure to quickly catch up

313  
00:13:02,360 --> 00:12:58,980

with you

314

00:13:03,559 --> 00:13:02,370

and I am thrilled to bits and I'll be

315

00:13:05,480 --> 00:13:03,569

thrilled to bits to stay up all night

316

00:13:07,069 --> 00:13:05,490

here in Sydney Australia and by the way

317

00:13:09,110 --> 00:13:07,079

folks and you can probably figure out

318

00:13:11,210 --> 00:13:09,120

now from what I'm about to say exactly

319

00:13:13,460 --> 00:13:11,220

when I'm talking to Evan because I'm

320

00:13:16,280 --> 00:13:13,470

looking at the NASA website and there's

321

00:13:19,129 --> 00:13:16,290

a countdown clock and it says ellipse

322

00:13:25,220 --> 00:13:19,139

countdown until first contact in Oregon

323

00:13:27,739 --> 00:13:25,230

or was 21st is five days 16 hours and 37

324

00:13:29,900 --> 00:13:27,749

minutes and by the time this episode of

325

00:13:32,569 --> 00:13:29,910

the skeptic zone goes out it'll be a lot

326

00:13:34,730 --> 00:13:32,579

less than that and Evan I'm delighted

327

00:13:35,869 --> 00:13:34,740

that I'll be seeing you and the rest of

328

00:13:38,869 --> 00:13:35,879

SGU

329

00:13:40,759 --> 00:13:38,879

oh oh in a couple of months at the the

330

00:13:43,129 --> 00:13:40,769

saikhan in Las Vegas that's going to be

331

00:13:45,319 --> 00:13:43,139

great that's right the last weekend in

332

00:13:46,009 --> 00:13:45,329

October psyche on Las Vegas I can't wait

333

00:13:48,199 --> 00:13:46,019

to see you there

334

00:13:52,220 --> 00:13:48,209

so there you go exciting times coming up

335

00:13:54,379 --> 00:13:52,230

Evan I'm jealous and on jealous of our

336

00:13:56,179 --> 00:13:54,389

reporter Iran Saheb who's going to be

337

00:13:58,100 --> 00:13:56,189

there he's travel all the way to United

338

00:14:00,110 --> 00:13:58,110

States to see it and all I can say is

339

00:14:03,490 --> 00:14:00,120

good luck and I hope you have clear

340

00:14:13,310 --> 00:14:03,500

skies thank you Richard as do I

341

00:14:18,290 --> 00:14:16,639

solar eclipse misconceptions NASA has

342

00:14:19,639 --> 00:14:18,300

dedicated a page on their website to

343

00:14:22,220 --> 00:14:19,649

these a few of which I've not heard

344

00:14:24,170 --> 00:14:22,230

before for example that total solar

345

00:14:26,210 --> 00:14:24,180

eclipses produce harmful rays that can

346

00:14:27,980 --> 00:14:26,220

cause blindness and what they're talking

347

00:14:30,829 --> 00:14:27,990

about here is not the direct light of

348

00:14:32,809 --> 00:14:30,839

the Sun but rather the emission of

349

00:14:34,790 --> 00:14:32,819

electromagnetic radiation from the

350

00:14:36,559 --> 00:14:34,800

corona which the scientists have studied

351

00:14:38,150 --> 00:14:36,569

very thoroughly for a long time and

352

00:14:40,610 --> 00:14:38,160

they're saying that nothing in the

353

00:14:42,470 --> 00:14:40,620

coronal light can cross 150 million

354

00:14:44,600 --> 00:14:42,480

kilometres of space penetrate our

355

00:14:47,780 --> 00:14:44,610

atmosphere and cause blindness

356

00:14:49,550 --> 00:14:47,790

so that is a myth another one if you are

357

00:14:51,249 --> 00:14:49,560

pregnant you should not watch the

358

00:14:54,259 --> 00:14:51,259

Eclipse because it can harm your baby

359

00:14:57,139 --> 00:14:54,269

again incorrect what they're talking

360

00:15:00,050 --> 00:14:57,149

about in this one are neutrinos the Sun

361

00:15:03,350 --> 00:15:00,060

emits trillions of neutrinos constantly

362

00:15:06,350 --> 00:15:03,360

that penetrate everywhere space the moon

363

00:15:09,590 --> 00:15:06,360

the planet and you so it's happening all

364

00:15:12,350 --> 00:15:09,600

the time and operas imposes no threat to

365

00:15:14,900 --> 00:15:12,360

a pregnant woman or her fetus another

366

00:15:16,730 --> 00:15:14,910

one eclipses will poison any food that

367

00:15:18,410 --> 00:15:16,740

is prepared during the event this is

368

00:15:20,360 --> 00:15:18,420

interesting if they say it's related to

369

00:15:22,759 --> 00:15:20,370

the false idea of harmful solar rays

370

00:15:24,559 --> 00:15:22,769

during a total of solar but some type of

371

00:15:28,129 --> 00:15:24,569

radiation is produced that will harm

372

00:15:29,840 --> 00:15:28,139

your food no problem there don't worry

373

00:15:32,120 --> 00:15:29,850

about that although be cautious of

374

00:15:34,040 --> 00:15:32,130

eating in and around the eclipses to be

375

00:15:35,840 --> 00:15:34,050

courteous to others but other than that

376

00:15:36,280 --> 00:15:35,850

there is no harm in the food that you'll

377

00:15:37,869 --> 00:15:36,290

be

378

00:15:42,189 --> 00:15:37,879

so this is an interesting website

379

00:15:43,900 --> 00:15:42,199

Eclipse 2017 nasa.gov lookup eclipse

380

00:15:56,859 --> 00:15:43,910

misconceptions there are some more there

381

00:15:59,319 --> 00:15:56,869

for you to read and enjoy today's

382

00:16:00,639 --> 00:15:59,329

Saturday August 19th just two days to go

383

00:16:02,579 --> 00:16:00,649

before the Eclipse

384

00:16:05,469 --> 00:16:02,589

I am here in Oregon at my destination

385

00:16:07,239 --> 00:16:05,479

dead center line of the Eclipse cannot

386

00:16:09,009 --> 00:16:07,249

wait but I'm not gonna talk about the

387

00:16:12,189 --> 00:16:09,019

Eclipse today I'm going to talk about

388

00:16:15,340 --> 00:16:12,199

perry deangelis perry died 10 years ago

389

00:16:17,049 --> 00:16:15,350

today still perhaps the saddest day of

390

00:16:17,619 --> 00:16:17,059

my life one of the two saddest days of

391

00:16:19,179 --> 00:16:17,629

my life

392

00:16:21,789 --> 00:16:19,189

the other was the passing of my father

393

00:16:23,529 --> 00:16:21,799

and certainly the passing of Perry these

394

00:16:26,650 --> 00:16:23,539

are the two people who have gone in my

395

00:16:29,679 --> 00:16:26,660

life who I think about every single day

396

00:16:31,960 --> 00:16:29,689

without fail no doubt about it without

397

00:16:34,239 --> 00:16:31,970

Perry there would be no skeptics guide

398

00:16:35,889 --> 00:16:34,249

to the universe without Perry there

399

00:16:38,049 --> 00:16:35,899

would have been no New England sceptical

400

00:16:39,639 --> 00:16:38,059

Society and without Perry there would

401  
00:16:42,309 --> 00:16:39,649  
have been no Connecticut sceptical

402  
00:16:43,869 --> 00:16:42,319  
Society which was really the Acorn for

403  
00:16:46,239 --> 00:16:43,879  
everything leading up to the skeptics

404  
00:16:48,669 --> 00:16:46,249  
guide to the universe the influence he

405  
00:16:50,919 --> 00:16:48,679  
had on both our little local skeptics

406  
00:16:54,879 --> 00:16:50,929  
organization and what became ultimately

407  
00:16:57,669 --> 00:16:54,889  
the show is too great to measure there's

408  
00:17:01,179 --> 00:16:57,679  
a tremendously great friend to me one of

409  
00:17:02,889 --> 00:17:01,189  
my certainly best friends ever and I

410  
00:17:06,429 --> 00:17:02,899  
think people had got a real good sense

411  
00:17:08,319 --> 00:17:06,439  
of his bigger than life personality from

412  
00:17:10,509 --> 00:17:08,329  
the show and just from the 100 or so

413  
00:17:14,319 --> 00:17:10,519

episodes that he participated in before

414

00:17:16,659 --> 00:17:14,329

before he died and again we're reminded

415

00:17:20,799 --> 00:17:16,669

of that quite often by listeners another

416

00:17:23,939 --> 00:17:20,809

I know that Bob Mrs. and Jamison Steve

417

00:17:26,470 --> 00:17:23,949

misses him Kara would have missed him

418

00:17:28,869 --> 00:17:26,480

had she had the chance certainly to have

419

00:17:31,659 --> 00:17:28,879

met him and like I said before I miss

420

00:17:33,519 --> 00:17:31,669

him every single day so today I dedicate

421

00:17:35,649 --> 00:17:33,529

to you my dear friend Perry DeAngelis

422

00:17:37,720 --> 00:17:35,659

10 years ago we've lost you you'll never

423

00:17:39,039 --> 00:17:37,730

be forgotten your influence on the

424

00:17:41,440 --> 00:17:39,049

skeptics guide to the universe will

425

00:17:43,710 --> 00:17:41,450

continue for as long as we do these

426

00:17:47,340 --> 00:17:43,720

episodes and even beyond that

427

00:18:05,340 --> 00:17:47,350

and I just wanted to make sure that this

428

00:18:07,680 --> 00:18:05,350

day was dedicated for you and now direct

429

00:18:08,190 --> 00:18:07,690

from the cafe and Australia's Science

430

00:18:11,340 --> 00:18:08,200

Channel

431

00:18:14,789 --> 00:18:11,350

it's brouhaha science in less time than

432

00:18:22,230 --> 00:18:14,799

it takes to order a coffee with Kelly

433

00:18:23,820 --> 00:18:22,240

womp Australia we have a showdown in one

434

00:18:26,220 --> 00:18:23,830

corner we have the technology of the

435

00:18:29,369 --> 00:18:26,230

future and in the other the technology

436

00:18:31,259 --> 00:18:29,379

of the 1800s the world's largest solar

437

00:18:32,999 --> 00:18:31,269

thermal power plant is coming to Port

438

00:18:35,399 --> 00:18:33,009

## Augusta in South Australia

439

00:18:37,110 --> 00:18:35,409

this latest renewable energy news comes

440

00:18:39,570 --> 00:18:37,120

after the announcement of the world's

441

00:18:41,879 --> 00:18:39,580

biggest lithium-ion battery and joins a

442

00:18:44,909 --> 00:18:41,889

whole bunch of existing and planned wind

443

00:18:46,470 --> 00:18:44,919

turbines the solar thermal plant works

444

00:18:49,440 --> 00:18:46,480

by using mirrors to reflect sunlight

445

00:18:51,480 --> 00:18:49,450

onto a tower that heats up molten solar

446

00:18:54,450 --> 00:18:51,490

this creates steam which will power

447

00:18:57,330 --> 00:18:54,460

turbines to generate energy plus the

448

00:18:58,830 --> 00:18:57,340

salt stores heat so any excess energy

449

00:19:01,399 --> 00:18:58,840

can be safe to keep generating

450

00:19:04,139 --> 00:19:01,409

electricity when the Sun isn't shining

451  
00:19:05,999 --> 00:19:04,149  
meanwhile over in Queensland we have

452  
00:19:09,330 --> 00:19:06,009  
massive coal mines being planned and

453  
00:19:11,190 --> 00:19:09,340  
invested in but hey we love a good share

454  
00:19:13,889 --> 00:19:11,200  
down and this should be an incredible

455  
00:19:15,749 --> 00:19:13,899  
one which state will come up on top it's

456  
00:19:18,570 --> 00:19:15,759  
a test of how much benefit can be gained

457  
00:19:20,399 --> 00:19:18,580  
from renewable energy the data from the

458  
00:19:22,409 --> 00:19:20,409  
economic and environmental outputs will

459  
00:19:27,370 --> 00:19:22,419  
speak for themselves but between you and

460  
00:20:08,930 --> 00:19:30,740  
for more brouhaha and Australian science

461  
00:20:10,669 --> 00:20:08,940  
visit [www.surgicalscience.com](http://www.surgicalscience.com) here with

462  
00:20:11,120 --> 00:20:10,679  
one of the attendees who have we got

463  
00:20:14,000 --> 00:20:11,130

here

464

00:20:15,799 --> 00:20:14,010

we've got John hello John how are you

465

00:20:18,980 --> 00:20:15,809

well thank you and have you been

466

00:20:21,289 --> 00:20:18,990

enjoying the event so far oh very much

467

00:20:23,419 --> 00:20:21,299

so particularly the talks the

468

00:20:26,950 --> 00:20:23,429

presentations have been amazing so yeah

469

00:20:34,280 --> 00:20:30,890

Alan Duffy David Mellon I mean they're

470

00:20:36,289 --> 00:20:34,290

all read Watson near all amazing people

471

00:20:38,270 --> 00:20:36,299

but everyone's been enthusiastic

472

00:20:41,539 --> 00:20:38,280

actually Dylan I think Dylan's a star

473

00:20:43,820 --> 00:20:41,549

who's entertaining and particularly for

474

00:20:46,909 --> 00:20:43,830

me it's the photographic things I've

475

00:20:51,440 --> 00:20:46,919

learnt or reminded it's actually not

476

00:20:53,960 --> 00:20:51,450

rocket science that actually it's fairly

477

00:20:56,900 --> 00:20:53,970

simple but also encouraged to just have

478

00:20:58,820 --> 00:20:56,910

a garden yes yes I learned a lot as well

479

00:21:01,100 --> 00:20:58,830

not knowing much about photography to

480

00:21:04,190 --> 00:21:01,110

start with but um it's actually inspired

481

00:21:06,830 --> 00:21:04,200

me to get out there and get out the

482

00:21:08,990 --> 00:21:06,840

camera at home it's it's so easy just to

483

00:21:10,820 --> 00:21:09,000

take your mobile phone with you and get

484

00:21:13,970 --> 00:21:10,830

lazy about getting the camera out but

485

00:21:15,740 --> 00:21:13,980

I'm I'm gonna I'm gonna start getting

486

00:21:17,480 --> 00:21:15,750

the camera out again I've been very

487

00:21:19,640 --> 00:21:17,490

inspired by what I've heard this weekend

488

00:21:21,380 --> 00:21:19,650

yeah I think that the ability to have

489

00:21:23,390 --> 00:21:21,390

reduced noise you take that step

490

00:21:26,210 --> 00:21:23,400

multiple photos and you have to have

491

00:21:29,120 --> 00:21:26,220

software to stitch them together but no

492

00:21:31,880 --> 00:21:29,130

Mike G just talked about single photos

493

00:21:33,370 --> 00:21:31,890

he just does 30-second exposures and

494

00:21:36,130 --> 00:21:33,380

that's it so

495

00:21:38,470 --> 00:21:36,140

yeah anyone can ever go that's just made

496

00:21:40,029 --> 00:21:38,480

the list light pollution yeah that's

497

00:21:42,700 --> 00:21:40,039

true and that was another talk about

498

00:21:45,460 --> 00:21:42,710

life Lucifer instant over you and I were

499

00:21:50,830 --> 00:21:45,470

we got talking I think was yesterday in

500

00:21:52,779 --> 00:21:50,840

one of the breaks and as it always tends

501  
00:21:55,750 --> 00:21:52,789  
to do with me the conversation comes

502  
00:21:58,419 --> 00:21:55,760  
around to vaccinations because and as

503  
00:22:01,390 --> 00:21:58,429  
listeners of the podcasts know that's

504  
00:22:05,110 --> 00:22:01,400  
one of my passions and and trying to

505  
00:22:10,149 --> 00:22:05,120  
trying to raise awareness and and you

506  
00:22:12,669 --> 00:22:10,159  
told me a story of how this issue has

507  
00:22:16,060 --> 00:22:12,679  
touched you personally what could you

508  
00:22:18,940 --> 00:22:16,070  
could you share your story our second

509  
00:22:22,510 --> 00:22:18,950  
son Matthew like typical Matt was a

510  
00:22:24,610 --> 00:22:22,520  
fairly severe asthmatic and we

511  
00:22:26,409 --> 00:22:24,620  
discovered this at an early age he was

512  
00:22:32,169 --> 00:22:26,419  
allergic to a lot of things like egg

513  
00:22:34,960 --> 00:22:32,179

milk chocolate and other other various

514

00:22:36,220 --> 00:22:34,970

I'm not sure about nuts but in the early

515

00:22:39,390 --> 00:22:36,230

eighties a lot of the stuff wasn't

516

00:22:41,890 --> 00:22:39,400

tested for he was unable to have a

517

00:22:44,020 --> 00:22:41,900

whooping cough vaccination it was

518

00:22:47,520 --> 00:22:44,030

actually a medical advice that we young

519

00:22:51,250 --> 00:22:47,530

we'd to God a little bit later he was

520

00:22:55,600 --> 00:22:51,260

four and we're in the UK and he

521

00:22:58,090 --> 00:22:55,610

contracted whooping cough and he was

522

00:23:00,880 --> 00:22:58,100

pretty unwell we had no idea what was

523

00:23:05,649 --> 00:23:00,890

going on but we did get told of a

524

00:23:07,820 --> 00:23:05,659

sweeping cough he you know he grew up he

525

00:23:10,340 --> 00:23:07,830

grew less

526

00:23:13,330 --> 00:23:10,350

our problems with asthma he started to

527

00:23:18,740 --> 00:23:13,340

be able to tolerate foods like milk and

528

00:23:20,890 --> 00:23:18,750

other things but when he ever he was

529

00:23:23,930 --> 00:23:20,900

really unwell we could still hear this

530

00:23:29,450 --> 00:23:23,940

in his voice the the classic whooping

531

00:23:31,850 --> 00:23:29,460

cough sign anyway one of the side

532

00:23:33,890 --> 00:23:31,860

effects of his asthma was that he had a

533

00:23:35,600 --> 00:23:33,900

lot of printers own pen design affects

534

00:23:40,910 --> 00:23:35,610

the teeth particularly if you have a lot

535

00:23:44,690 --> 00:23:40,920

of it and when he was in his 20s he had

536

00:23:46,280 --> 00:23:44,700

to have a emergency operation to have

537

00:23:47,930 --> 00:23:46,290

his wisdom teeth out because they'd

538

00:23:50,230 --> 00:23:47,940

actually work on bling and I were

539

00:23:53,720 --> 00:23:50,240

obsessing and all sorts of nasty stuff

540

00:23:57,710 --> 00:23:53,730

and unfortunately during the operation

541

00:24:00,050 --> 00:23:57,720

he had a severe asthma attack and a

542

00:24:01,400 --> 00:24:00,060

result of a severe asthma attack if you

543

00:24:04,310 --> 00:24:01,410

stop breathing eventually the heart

544

00:24:08,210 --> 00:24:04,320

stops and it took them 15 minutes to get

545

00:24:10,670 --> 00:24:08,220

it restarted and unfortunate result of

546

00:24:14,000 --> 00:24:10,680

that was that he was declared brain-dead

547

00:24:16,850 --> 00:24:14,010

a little bit of a bright light was that

548

00:24:17,900 --> 00:24:16,860

he let us know that he wanted to donate

549

00:24:19,400 --> 00:24:17,910

organs so I don't know why I

550

00:24:22,760 --> 00:24:19,410

twenty-year-old would think about that

551  
00:24:25,520 --> 00:24:22,770  
but he had and say we were to say yes to

552  
00:24:28,340 --> 00:24:25,530  
the organ donation and we had a

553  
00:24:29,780 --> 00:24:28,350  
wonderful story a letter from Walla

554  
00:24:32,960 --> 00:24:29,790  
rototillers of this little four-year-old

555  
00:24:35,060 --> 00:24:32,970  
girl on Victoria who received received

556  
00:24:39,170 --> 00:24:35,070  
his one of his kidneys and she had gone

557  
00:24:42,080 --> 00:24:39,180  
from me I'm done well you know with what

558  
00:24:44,390 --> 00:24:42,090  
the condition to being a normal little

559  
00:24:45,800 --> 00:24:44,400  
four-year-old girl again so it was it

560  
00:24:47,480 --> 00:24:45,810  
just made our Christmas their first

561  
00:24:50,090 --> 00:24:47,490  
Christmas because matalava Christmas was

562  
00:24:52,310 --> 00:24:50,100  
very hard there were other conditions

563  
00:24:54,890 --> 00:24:52,320

that contributed to him having this

564

00:24:58,360 --> 00:24:54,900

asthma attack I mean unfortunately like

565

00:25:03,710 --> 00:24:58,370

most lot of rebel young folk had started

566

00:25:06,920 --> 00:25:03,720

smoking but it shocked the anesthesia

567

00:25:09,590 --> 00:25:06,930

community they had never expected that

568

00:25:12,460 --> 00:25:09,600

young adult twenty-year-old would have

569

00:25:15,440 --> 00:25:12,470

that sort of a problem under anesthesia

570

00:25:16,220 --> 00:25:15,450

if Matt had been vaccinated against

571

00:25:19,600 --> 00:25:16,230

himself

572

00:25:23,390 --> 00:25:19,610

I wouldn't be telling him a story so

573

00:25:26,080 --> 00:25:23,400

what what you're saying is in relation

574

00:25:29,799 --> 00:25:26,090

to the whooping cough it did have a

575

00:25:32,450 --> 00:25:29,809

permanent effect on his lungs he had

576

00:25:33,770 --> 00:25:32,460

well he might have had bronchiectasis or

577

00:25:35,600 --> 00:25:33,780

something like that permanent scarring

578

00:25:39,020 --> 00:25:35,610

of the lungs from whooping cough which

579

00:25:41,570 --> 00:25:39,030

then along with the asthma and and other

580

00:25:43,310 --> 00:25:41,580

contributing factors may have

581

00:25:45,590 --> 00:25:43,320

contributed to what - what happened

582

00:25:47,030 --> 00:25:45,600

everything I would say without doubt I'm

583

00:25:50,390 --> 00:25:47,040

not a medical person

584

00:25:52,910 --> 00:25:50,400

we didn't decline a formal coroner's

585

00:25:54,650 --> 00:25:52,920

inquiry a friend of ours who was a

586

00:25:57,110 --> 00:25:54,660

doctor said we wouldn't get any answers

587

00:26:00,320 --> 00:25:57,120

out of it he was dead you know we

588

00:26:04,790 --> 00:26:00,330

wouldn't get him back so I would believe

589

00:26:08,480 --> 00:26:04,800

so I know now that before any asthmatic

590

00:26:11,390 --> 00:26:08,490

has is going under anesthesia they do

591

00:26:13,940 --> 00:26:11,400

actually do tests or they will demand

592

00:26:15,860 --> 00:26:13,950

tests so that was one positive but yeah

593

00:26:18,470 --> 00:26:15,870

I believe he was really sensitive to it

594

00:26:21,410 --> 00:26:18,480

and whatever trigger that he had been

595

00:26:24,380 --> 00:26:21,420

under anesthesia before but this

596

00:26:26,720 --> 00:26:24,390

particular time all the variables meant

597

00:26:29,120 --> 00:26:26,730

that and he had this attack and I

598

00:26:30,530 --> 00:26:29,130

actually asked once what and they just

599

00:26:31,940 --> 00:26:30,540

bring him out as the anaesthetic and

600

00:26:34,400 --> 00:26:31,950

they said it would have been a nightmare

601  
00:26:36,740 --> 00:26:34,410  
they actually couldn't do that they had

602  
00:26:40,370 --> 00:26:36,750  
to keep him going until they tried to

603  
00:26:43,370 --> 00:26:40,380  
fix the problem yes I firmly believed

604  
00:26:45,919 --> 00:26:43,380  
that if it had to the vaccination hadn't

605  
00:26:47,530 --> 00:26:45,929  
got whooping cough we would have still

606  
00:26:49,780 --> 00:26:47,540  
had our man

607  
00:26:52,900 --> 00:26:49,790  
I'm sorry I'm so sorry for what you've

608  
00:26:57,090 --> 00:26:52,910  
been through but so grateful that you've

609  
00:27:03,880 --> 00:27:00,910  
vaccination is such a hot topic around

610  
00:27:06,700 --> 00:27:03,890  
here and we need people like you to tell

611  
00:27:09,370 --> 00:27:06,710  
those stories about how it has

612  
00:27:11,830 --> 00:27:09,380  
personally affected your lives and the

613  
00:27:15,820 --> 00:27:11,840

life of your son but what an amazing

614

00:27:18,760 --> 00:27:15,830

legacy that he was an organ donor yes it

615

00:27:21,520 --> 00:27:18,770

was wonderful and was was for a friend

616

00:27:24,880 --> 00:27:21,530

of my wife's who had received organs he

617

00:27:27,010 --> 00:27:24,890

was critically ill and started the game

618

00:27:31,900 --> 00:27:27,020

if you like and actually we're going to

619

00:27:34,180 --> 00:27:31,910

a few and Queensland they have service

620

00:27:36,490 --> 00:27:34,190

every year for donors or donor families

621

00:27:38,380 --> 00:27:36,500

and organ recipients and to see these

622

00:27:42,160 --> 00:27:38,390

recipients what they do with their life

623

00:27:43,930 --> 00:27:42,170

is very positively encouraging but just

624

00:27:46,470 --> 00:27:43,940

going back to the vaccination thing I

625

00:27:49,030 --> 00:27:46,480

think that if you don't want your own

626

00:27:51,870 --> 00:27:49,040

child that's know the thing about who

627

00:27:55,000 --> 00:27:51,880

that child comes in contact with come in

628

00:27:56,830 --> 00:27:55,010

you're giving them something if they're

629

00:27:59,500 --> 00:27:56,840

not vaccinating themselves and they

630

00:28:02,290 --> 00:27:59,510

can't be vaccinated why am i met no

631

00:28:04,270 --> 00:28:02,300

chance yes I heard immunity community

632

00:28:07,030 --> 00:28:04,280

immunity is just so important it's not

633

00:28:09,010 --> 00:28:07,040

just to protect ourselves its bits to

634

00:28:11,320 --> 00:28:09,020

protect the vulnerable in our in a

635

00:28:12,820 --> 00:28:11,330

community as well and to even be talking

636

00:28:15,430 --> 00:28:12,830

about having a whooping cough problem

637

00:28:17,510 --> 00:28:15,440

and miss Dana age where we shouldn't

638

00:28:20,030 --> 00:28:17,520

have it it just should not occur

639

00:28:20,720 --> 00:28:20,040

absolutely thank you so much for your

640

00:28:23,840 --> 00:28:20,730

time today

641

00:28:30,110 --> 00:28:23,850

it was such a pleasure making them thank

642

00:28:32,150 --> 00:28:30,120

you for sharing this story to add to

643

00:28:33,560 --> 00:28:32,160

Heidi's report in the last week the

644

00:28:37,460 --> 00:28:33,570

Australian Government has launched a

645

00:28:39,680 --> 00:28:37,470

campaign to persuade parents to get

646

00:28:43,460 --> 00:28:39,690

their children vaccinated and their

647

00:28:45,110 --> 00:28:43,470

children's vaccinations up-to-date and I

648

00:28:48,410 --> 00:28:45,120

thought it would be appropriate to play

649

00:28:52,820 --> 00:28:48,420

the audio from one of the accompanying

650

00:28:54,110 --> 00:28:52,830

videos of this campaign we want to make

651  
00:28:56,030 --> 00:28:54,120  
sure our kids were protected from

652  
00:28:58,100 --> 00:28:56,040  
serious diseases which is why I made

653  
00:28:59,840 --> 00:28:58,110  
sure this one completed our vaccinations

654  
00:29:01,760 --> 00:28:59,850  
ninety three percent of our kids are

655  
00:29:03,800 --> 00:29:01,770  
fully vaccinated but it's not high

656  
00:29:06,020 --> 00:29:03,810  
enough we need to do more to protect all

657  
00:29:06,680 --> 00:29:06,030  
our kids our babies Dana died from

658  
00:29:09,200 --> 00:29:06,690  
whooping cough

659  
00:29:11,570 --> 00:29:09,210  
she was only one month old and too young

660  
00:29:13,880 --> 00:29:11,580  
to be vaccinated lived in an area with

661  
00:29:15,830 --> 00:29:13,890  
low immunization rates our baby son

662  
00:29:18,890 --> 00:29:15,840  
Riley died from a vaccine preventable

663  
00:29:21,110 --> 00:29:18,900

disease nothing can bring him back but

664

00:29:23,380 --> 00:29:21,120

together we can all help to prevent this

665

00:29:25,760 --> 00:29:23,390

tragedy from happening to other families

666

00:29:28,400 --> 00:29:25,770

vaccination protects your child from

667

00:29:31,280 --> 00:29:28,410

serious diseases but it also protects

668

00:29:32,150 --> 00:29:31,290

other children to immunization saves

669

00:29:33,770 --> 00:29:32,160

lives

670

00:29:35,600 --> 00:29:33,780

get the facts visit the website

671

00:29:37,640 --> 00:29:35,610

authorised by the Australian Government

672

00:29:40,100 --> 00:29:37,650

Canberra this campaign from the

673

00:29:43,640 --> 00:29:40,110

government comes hot on the heels of the

674

00:29:45,500 --> 00:29:43,650

recent tour of the so called documentary

675

00:29:47,660 --> 00:29:45,510

of axed which you've been hearing about

676

00:29:50,090 --> 00:29:47,670

on the last couple of episodes of the

677

00:29:52,760 --> 00:29:50,100

sceptic zone and we can only hope that

678

00:29:55,790 --> 00:29:52,770

some of the damage done by this wretched

679

00:29:58,900 --> 00:29:55,800

documentary is being undone by this

680

00:30:07,730 --> 00:29:58,910

campaign from the federal government

681

00:30:10,169 --> 00:30:07,740

[Music]

682

00:30:12,900 --> 00:30:10,179

Meli's cat et cetera

683

00:30:14,490 --> 00:30:12,910

Travis Claire Union bar spoon or

684

00:30:16,020 --> 00:30:14,500

cleanser Turki every upscale house

685

00:30:18,570 --> 00:30:16,030

scattered scale Congress Surat Annisa

686

00:30:21,270 --> 00:30:18,580

sarunas auditioning Congress table

687

00:30:23,430 --> 00:30:21,280

cannot post k bratislava Advocaat I hope

688

00:30:26,490 --> 00:30:23,440

drew her hood with versatile to Paros RC

689

00:30:28,770 --> 00:30:26,500

I am with Stephen Bosworth th pet

690

00:30:31,740 --> 00:30:28,780

opposing the sick she's 5000 Cygnus

691

00:30:34,260 --> 00:30:31,750

vehicle so James Randi susan gerbic mark

692

00:30:37,169 --> 00:30:34,270

Lynas Susan Blackmore Scotland felt

693

00:30:40,080 --> 00:30:37,179

Adele she poha Vashti automatic echo

694

00:30:43,650 --> 00:30:40,090

nabu's Nevada so do Veda immediate

695

00:30:46,049 --> 00:30:43,660

parent - its Ronnie Dahl she Procopio

696

00:30:49,110 --> 00:30:46,059

sue pinky a provision format sea fish

697

00:30:51,030 --> 00:30:49,120

Dana Euroskeptics con petka org and the

698

00:30:51,880 --> 00:30:51,040

bonus naina Donna Facebook ooh the

699

00:30:55,060 --> 00:30:51,890

shima-san Abbas

700

00:30:58,010 --> 00:30:55,070

[Music]

701  
00:31:00,169 --> 00:30:58,020  
hello dear skeptical friends this is

702  
00:31:03,860 --> 00:31:00,179  
Clara clean birth who organized her of

703  
00:31:05,750 --> 00:31:03,870  
the European skeptics Congress 2017 this

704  
00:31:08,150 --> 00:31:05,760  
year the Congress will be held in broad

705  
00:31:11,480 --> 00:31:08,160  
South Pole and on September 22nd to 24th

706  
00:31:14,029 --> 00:31:11,490  
and is my absolute pleasure to invite

707  
00:31:17,270 --> 00:31:14,039  
you to attend come and listen to talks

708  
00:31:19,789 --> 00:31:17,280  
by James Randi susan gerbic mark Lynas

709  
00:31:22,279 --> 00:31:19,799  
Susan Blackmore Scott Lavin Feld and

710  
00:31:24,070 --> 00:31:22,289  
others discuss topics like science and

711  
00:31:27,380 --> 00:31:24,080  
religion to the science and media

712  
00:31:29,450 --> 00:31:27,390  
paranormal investigation and more to buy

713  
00:31:33,140 --> 00:31:29,460

a ticket and to get more information by

714

00:31:38,740 --> 00:31:33,150

the Congress go to Euroskeptics con org

715

00:31:38,750 --> 00:31:47,539

[Music]

716

00:31:56,500 --> 00:31:52,469

years may not spooky action at a

717

00:32:01,400 --> 00:31:59,450

yes the inner city of Sydney here where

718

00:32:02,990 --> 00:32:01,410

we've got the amazing Harris Street

719

00:32:05,510 --> 00:32:03,000

Altima with the wonderful powerhouse

720

00:32:07,610 --> 00:32:05,520

here it is the opening I'm sort of a bit

721

00:32:08,930 --> 00:32:07,620

of a vent for Sydney science festival

722

00:32:10,520 --> 00:32:08,940

that's right it's science week Sydney

723

00:32:12,650 --> 00:32:10,530

Science Festival all going on here and

724

00:32:14,750 --> 00:32:12,660

being Sydney everyone's talking about

725

00:32:16,760 --> 00:32:14,760

the career everyone's talking about

726

00:32:18,860 --> 00:32:16,770

Chinese investment in the property

727

00:32:20,090 --> 00:32:18,870

market everybody's talking about how

728

00:32:21,710 --> 00:32:20,100

they had to borrow money from their

729

00:32:23,120 --> 00:32:21,720

parents to even think about owning a

730

00:32:24,380 --> 00:32:23,130

house and people are talking about how

731

00:32:26,060 --> 00:32:24,390

it's just too expensive to live in

732

00:32:27,680 --> 00:32:26,070

Sydney in the first place but of course

733

00:32:29,270 --> 00:32:27,690

it's all about science a never that we

734

00:32:30,890 --> 00:32:29,280

could meet some scientists here tonight

735

00:32:32,240 --> 00:32:30,900

and that's why I'm here that's why I've

736

00:32:35,240 --> 00:32:32,250

licked my hair back because they might

737

00:32:37,190 --> 00:32:35,250

just think I'm Max Headroom

738

00:32:39,530 --> 00:32:37,200

may not hear coming to you from Mars now

739

00:32:41,390 --> 00:32:39,540

as we all know this isn't Mars but

740

00:32:43,610 --> 00:32:41,400

everything you see from the Mars rover

741

00:32:45,680 --> 00:32:43,620

an all those 11 Mars Lander stuff and

742

00:32:48,170 --> 00:32:45,690

even that movie the Martian was nowhere

743

00:32:49,640 --> 00:32:48,180

near Mars it was actually shot at have a

744

00:32:51,440 --> 00:32:49,650

straight Ultimo and you can tell because

745

00:32:53,120 --> 00:32:51,450

if they had the sound up and that's why

746

00:32:54,620 --> 00:32:53,130

they don't send sound back from Mars

747

00:32:56,060 --> 00:32:54,630

because she'd hear the traffic going

748

00:32:57,950 --> 00:32:56,070

past on Harris Street and that's how you

749

00:32:59,390 --> 00:32:57,960

can tell that we're not on Mars it's all

750

00:33:01,280 --> 00:32:59,400

just done somewhere in Harris Street

751

00:33:03,320 --> 00:33:01,290

Oldham Oh like most stuff it I think the

752

00:33:04,790 --> 00:33:03,330

space programs done down the pool down

753

00:33:06,620 --> 00:33:04,800

the road that's what yeah

754

00:33:09,020 --> 00:33:06,630

whenever you're seeing this the

755

00:33:10,460 --> 00:33:09,030

universal the I you know the I is that

756

00:33:12,050 --> 00:33:10,470

the International Space Station what do

757

00:33:14,960 --> 00:33:12,060

you say they'd met going around that is

758

00:33:16,400 --> 00:33:14,970

in fact shot in the pool just down the

759

00:33:17,960 --> 00:33:16,410

road and have a straight Ultimo why

760

00:33:19,370 --> 00:33:17,970

spend money going there when you can do

761

00:33:22,160 --> 00:33:19,380

it in a pool I've always thought that

762

00:33:25,430 --> 00:33:22,170

our locals as I said I'm just standing

763

00:33:27,500 --> 00:33:25,440

next to where all the Mars rovers stuff

764

00:33:29,120 --> 00:33:27,510

is faked and here is what mr. faker a

765

00:33:31,820 --> 00:33:29,130

member of the shadowy elite a man of the

766

00:33:34,880 --> 00:33:31,830

origami first order it is Richard

767

00:33:36,740 --> 00:33:34,890

Saunders hello this is Mars Maynard this

768

00:33:38,180 --> 00:33:36,750

is not the Powerhouse Museum we're on

769

00:33:40,340 --> 00:33:38,190

madness have quite good isn't it looks

770

00:33:42,620 --> 00:33:40,350

like Mars well I guess it does it is

771

00:33:45,560 --> 00:33:42,630

pretty cool there it looks a lot like my

772

00:33:47,180 --> 00:33:45,570

dad's old rocker II in katara any

773

00:33:48,740 --> 00:33:47,190

Newcastle maybe that's where they filmed

774

00:33:49,880 --> 00:33:48,750

that the moon landing I don't know I

775

00:33:52,460 --> 00:33:49,890

think they probably did now there's a

776

00:33:53,960 --> 00:33:52,470

fair few people here we don't seem to

777

00:33:56,300 --> 00:33:53,970

know any of them is that because these

778

00:33:58,460 --> 00:33:56,310

are the people that have power it's

779

00:34:01,010 --> 00:33:58,470

because we're getting old yeah that's

780

00:34:02,480 --> 00:34:01,020

true look although I say we don't want

781

00:34:04,340 --> 00:34:02,490

to go out to a wild night the power

782

00:34:06,440 --> 00:34:04,350

house usually isn't the place I come to

783

00:34:08,510 --> 00:34:06,450

unless it's actually closed then you get

784

00:34:09,980 --> 00:34:08,520

it fun well you know what as soon as we

785

00:34:11,810 --> 00:34:09,990

walk in they gave a champagne and

786

00:34:13,060 --> 00:34:11,820

ordered so that's not too bad no we're

787

00:34:15,740 --> 00:34:13,070

here for the launch of the Sydney

788

00:34:18,050 --> 00:34:15,750

Science Festival so I'm really looking

789

00:34:20,990 --> 00:34:18,060

forward to it and you and I are taking

790

00:34:22,370 --> 00:34:21,000

part tomorrow in fact tomorrow morning

791

00:34:23,600 --> 00:34:22,380

we're doing science shows for school

792

00:34:25,760 --> 00:34:23,610

kids that's what we're gonna be doing

793

00:34:28,190 --> 00:34:25,770

stuff at the Australian Museum with the

794

00:34:30,080 --> 00:34:28,200

mystery investigators where we solve

795

00:34:31,790 --> 00:34:30,090

mysteries for them like can you poke a

796

00:34:34,460 --> 00:34:31,800

hole yourself with a bed of nails that

797

00:34:36,200 --> 00:34:34,470

sort of thing and you get to stand on my

798

00:34:38,880 --> 00:34:36,210

back when I'm on a bed of nails

799

00:34:40,860 --> 00:34:38,890

and play the trombone I'm standing on

800

00:34:42,720 --> 00:34:40,870

your back you do but look at everybody

801  
00:34:45,240 --> 00:34:42,730  
there are hundreds of people here all

802  
00:34:47,640 --> 00:34:45,250  
waiting for the speeches to get underway

803  
00:34:49,830 --> 00:34:47,650  
but so many people here for science it's

804  
00:34:51,120 --> 00:34:49,840  
great to see but it's good not many

805  
00:34:53,340 --> 00:34:51,130  
people here on the side of phrenology

806  
00:34:54,840 --> 00:34:53,350  
which is my favorite I've been trying to

807  
00:34:57,240 --> 00:34:54,850  
see if there's any phonology fans here

808  
00:34:59,370 --> 00:34:57,250  
haven't seen one oh you have to look for

809  
00:35:00,900 --> 00:34:59,380  
some I bet there will be and of course

810  
00:35:02,460 --> 00:35:00,910  
we're gonna be interested to see what

811  
00:35:03,660 --> 00:35:02,470  
the theme is this year normally they

812  
00:35:05,250 --> 00:35:03,670  
have a bit of a theme what do you think

813  
00:35:07,110 --> 00:35:05,260

they'll be going with this year oh I I

814

00:35:09,390 --> 00:35:07,120

don't know I don't know what maybe it

815

00:35:11,910 --> 00:35:09,400

should be phrenology actually again yeah

816

00:35:13,530 --> 00:35:11,920

I'll be pushing that and of course for

817

00:35:15,660 --> 00:35:13,540

the sceptic zone for you we were to have

818

00:35:17,780 --> 00:35:15,670

been given the tip that upstairs shortly

819

00:35:21,450 --> 00:35:17,790

there's gonna be twenty five scientists

820

00:35:23,430 --> 00:35:21,460

25 yes our good friend Frankie Lee we've

821

00:35:26,880 --> 00:35:23,440

known for years here in Sydney she walk

822

00:35:28,590 --> 00:35:26,890

bias with a tray of drinks she was

823

00:35:32,430 --> 00:35:28,600

carding behind the saying come upstairs

824

00:35:33,300 --> 00:35:32,440

at seven o'clock we have 25 scientists

825

00:35:34,920 --> 00:35:33,310

for you to interview

826

00:35:37,200 --> 00:35:34,930

I'm sure the beer phrenologist up there

827

00:35:38,400 --> 00:35:37,210

and if I can't find a phrenologist what

828

00:35:39,840 --> 00:35:38,410

are the scientists that make the ray

829

00:35:42,450 --> 00:35:39,850

guns what are they either they

830

00:35:44,520 --> 00:35:42,460

physicists or not I think that's Captain

831

00:35:49,710 --> 00:35:44,530

Kirk is then it's Batman that I'll be

832

00:35:51,120 --> 00:35:49,720

upstairs looking for Batman I'm just

833

00:35:52,590 --> 00:35:51,130

talking to a gentleman now what's the

834

00:35:54,780 --> 00:35:52,600

diamond pythons name first of all

835

00:35:56,640 --> 00:35:54,790

Yara yeah and what's your name sir Ryan

836

00:35:58,440 --> 00:35:56,650

on how things at Taronga Zoo

837

00:36:01,590 --> 00:35:58,450

absolutely beautiful pretty um yeah

838

00:36:02,940 --> 00:36:01,600

animals are happy a little we have a lot

839

00:36:04,080 --> 00:36:02,950

of overseas listens to the podcast the

840

00:36:05,790 --> 00:36:04,090

skeptics own and they think that

841

00:36:07,890 --> 00:36:05,800

Australia is full of things that will

842

00:36:09,930 --> 00:36:07,900

kill you but this is this Diamond Python

843

00:36:11,670 --> 00:36:09,940

it's a it's a constrictor so it kills

844

00:36:13,500 --> 00:36:11,680

you get what what does it like to eat is

845

00:36:14,850 --> 00:36:13,510

it is it a gauge or what's it do mainly

846

00:36:17,100 --> 00:36:14,860

if you can look at them it's got some

847

00:36:19,410 --> 00:36:17,110

hits against its job they hate pips I

848

00:36:20,940 --> 00:36:19,420

like to eat warm blooded creatures not

849

00:36:22,920 --> 00:36:20,950

saying it won't eat frogs and lizards

850

00:36:27,060 --> 00:36:22,930

and things like that but promptly birds

851

00:36:28,620 --> 00:36:27,070

or laid rats mice and possums okay

852

00:36:31,230 --> 00:36:28,630

so where do they live delight Avandia

853

00:36:34,500 --> 00:36:31,240

how so they live in some shrub what a

854

00:36:36,450 --> 00:36:34,510

lot of people will find is if I've got a

855

00:36:38,180 --> 00:36:36,460

chicken coop or if they get possums up

856

00:36:40,590 --> 00:36:38,190

in the roof they will get these

857

00:36:42,540 --> 00:36:40,600

beautiful creatures once the food source

858

00:36:44,370 --> 00:36:42,550

runs out they will move on and that so

859

00:36:45,960 --> 00:36:44,380

they're like the the baby possums when

860

00:36:46,350 --> 00:36:45,970

they're born just the big ones move too

861

00:36:48,270 --> 00:36:46,360

fast

862

00:36:50,380 --> 00:36:48,280

yeah mate they're quick enough get

863

00:36:53,820 --> 00:36:50,390

really beautiful craters and just with

864

00:36:56,260 --> 00:36:53,830

this one to see thumb there's absolutely

865

00:36:58,270 --> 00:36:56,270

no signs of stress with this girl she's

866

00:37:00,730 --> 00:36:58,280

really inquisitive and what she's

867

00:37:02,380 --> 00:37:00,740

looking at this lady over here so you

868

00:37:04,330 --> 00:37:02,390

looking at her scarf they love textures

869

00:37:05,980 --> 00:37:04,340

so what's he doing taking out this

870

00:37:08,290 --> 00:37:05,990

jacket MOSOP said that that's a tweed

871

00:37:09,400 --> 00:37:08,300

jacket which in Saunders is wearing look

872

00:37:10,750 --> 00:37:09,410

at a little tongue coming out she's

873

00:37:12,220 --> 00:37:10,760

smelling the food right right so it's

874

00:37:13,720 --> 00:37:12,230

smelling it and so is her

875

00:37:15,430 --> 00:37:13,730

three-dimensional view of the world

876

00:37:17,440 --> 00:37:15,440

being made by the eyes and the tongue

877

00:37:18,820 --> 00:37:17,450

together and how good are the eyes they

878

00:37:20,830 --> 00:37:18,830

got color what do they do and the heat

879

00:37:23,349 --> 00:37:20,840

as well with those ones here infrared

880

00:37:25,300 --> 00:37:23,359

more so okay eetz so these ones yeah

881

00:37:27,330 --> 00:37:25,310

they'll go to all these so with those

882

00:37:30,450 --> 00:37:27,340

with these what they do if a creature

883

00:37:34,330 --> 00:37:30,460

and the creature comes through a

884

00:37:36,430 --> 00:37:34,340

warm-blooded creature in in the dark to

885

00:37:39,400 --> 00:37:36,440

say there's a rat or a mouse or about

886

00:37:42,970 --> 00:37:39,410

the Flies past with what you'll do

887

00:37:44,710 --> 00:37:42,980

she senses hate through a jaw is it

888

00:37:46,120 --> 00:37:44,720

close up warmer warmer warmer and she

889

00:37:47,890 --> 00:37:46,130

grabs them so they send through infrared

890

00:37:48,970 --> 00:37:47,900

more so than anything is it we're

891

00:37:50,260 --> 00:37:48,980

sitting hitting anything what's that now

892

00:37:51,880 --> 00:37:50,270

and on the moment scene I would probably

893

00:37:54,400 --> 00:37:51,890

fader about once every two weeks and I'm

894

00:37:56,980 --> 00:37:54,410

yes you got fed not that long ago and

895

00:37:59,650 --> 00:37:56,990

I'm yes she's not here to be feed we are

896

00:38:01,060 --> 00:37:59,660

not part of her diet yes because should

897

00:38:03,310 --> 00:38:01,070

be saying man that's a very large heat

898

00:38:05,740 --> 00:38:03,320

source yeah right now beautiful creature

899

00:38:06,550 --> 00:38:05,750

and this is one about education animals

900

00:38:08,920 --> 00:38:06,560

as well hmm

901  
00:38:10,810 --> 00:38:08,930  
so what we're doing here great function

902  
00:38:13,450 --> 00:38:10,820  
great food powerhouse but it's also

903  
00:38:14,920 --> 00:38:13,460  
about just educating people about

904  
00:38:17,320 --> 00:38:14,930  
animals and what I can do to help as

905  
00:38:18,940 --> 00:38:17,330  
well and look more power of the stronger

906  
00:38:20,800 --> 00:38:18,950  
Zoo there and just one last thing

907  
00:38:22,510 --> 00:38:20,810  
um this is we're in New South Wales at

908  
00:38:25,000 --> 00:38:22,520  
the moment would this be a native to

909  
00:38:26,380 --> 00:38:25,010  
would we see okay all over Australia or

910  
00:38:28,720 --> 00:38:26,390  
mainly the eastern seaboard which walk

911  
00:38:31,240 --> 00:38:28,730  
probably three weeks ago and came across

912  
00:38:32,740 --> 00:38:31,250  
to all of these so yeah absolutely but

913  
00:38:34,150 --> 00:38:32,750

really did end do they look like a

914

00:38:36,550 --> 00:38:34,160

dangerous snake so you can make a

915

00:38:38,440 --> 00:38:36,560

mistake in your oh there are other

916

00:38:41,260 --> 00:38:38,450

creatures out there that have similar

917

00:38:43,450 --> 00:38:41,270

part markings that happen but these are

918

00:38:45,339 --> 00:38:43,460

constrictor okay but my thing is the

919

00:38:47,740 --> 00:38:45,349

green one that looks like that it's okay

920

00:38:48,910 --> 00:38:47,750

oh look at all snakes in the wild I

921

00:38:50,140 --> 00:38:48,920

wouldn't touch them

922

00:38:52,329 --> 00:38:50,150

there can be venomous fights and a lot

923

00:38:54,920 --> 00:38:52,339

of um species look very similar as well

924

00:38:57,740 --> 00:38:54,930

also even if she did strike two

925

00:39:00,859 --> 00:38:57,750

backward-facing fangs for gripping her

926

00:39:03,290 --> 00:39:00,869

prey so I could hurt as well as is the

927

00:39:04,670 --> 00:39:03,300

main thing it's to any wild animals just

928

00:39:07,130 --> 00:39:04,680

leave them alone and why them get a

929

00:39:08,720 --> 00:39:07,140

photo but Tess you don't have to handle

930

00:39:10,040 --> 00:39:08,730

them you know touch them leaving mine

931

00:39:12,260 --> 00:39:10,050

and just a Mario natural beautiful

932

00:39:13,790 --> 00:39:12,270

creatures and what's a website we could

933

00:39:16,280 --> 00:39:13,800

go to learn more about what you're doing

934

00:39:17,420 --> 00:39:16,290

education doctor are you

935

00:39:19,099 --> 00:39:17,430

that's not I have a good time here

936

00:39:21,109 --> 00:39:19,109

everyone's lining up for that owl look

937

00:39:23,990 --> 00:39:21,119

that was cool that was cool now we go

938

00:39:25,130 --> 00:39:24,000

from Saint to over here to frogs and as

939

00:39:26,960 --> 00:39:25,140

you know we were just talking about

940

00:39:28,730 --> 00:39:26,970

snakes then and when it comes to biology

941

00:39:30,530 --> 00:39:28,740

people can be very species it's a lot of

942

00:39:32,770 --> 00:39:30,540

people are big fans of snakes a lot of

943

00:39:34,640 --> 00:39:32,780

people are big on the higher primates

944

00:39:37,069 --> 00:39:34,650

but of course I'm here with someone

945

00:39:38,839 --> 00:39:37,079

who's into amphibians and frogs Jody how

946

00:39:40,670 --> 00:39:38,849

are you I'm great thank you how are you

947

00:39:43,400 --> 00:39:40,680

pretty good you are just glowing at the

948

00:39:44,720 --> 00:39:43,410

moment it's great to be here and I think

949

00:39:47,240 --> 00:39:44,730

you know that I love to talk about frogs

950

00:39:49,130 --> 00:39:47,250

oh I know indeed now I was over there

951  
00:39:52,250 --> 00:39:49,140  
with snakes now a snakes the sworn enemy

952  
00:39:54,680 --> 00:39:52,260  
of frogs there are a lot of snakes that

953  
00:39:56,180 --> 00:39:54,690  
are adapted to eating frogs and one of

954  
00:39:58,490 --> 00:39:56,190  
the things about being a proctologist is

955  
00:40:00,470 --> 00:39:58,500  
I do come across a lot of snakes because

956  
00:40:02,240 --> 00:40:00,480  
of that huh so do you make the ones that

957  
00:40:03,500 --> 00:40:02,250  
are constrictors or do meet poisonous

958  
00:40:06,980 --> 00:40:03,510  
dangerous ones in the South American

959  
00:40:09,440 --> 00:40:06,990  
forest a bit of both the kind of snakes

960  
00:40:11,660 --> 00:40:09,450  
that like frogs tend to not be the

961  
00:40:13,370 --> 00:40:11,670  
constrictors they're often the ones with

962  
00:40:14,870 --> 00:40:13,380  
venom but not always so you come across

963  
00:40:17,450 --> 00:40:14,880

all kinds especially the ones that like

964

00:40:19,430 --> 00:40:17,460

water but as long as you don't mess with

965

00:40:21,589 --> 00:40:19,440

them they they don't generally mess with

966

00:40:24,349 --> 00:40:21,599

you so you just leave them on their on

967

00:40:27,289 --> 00:40:24,359

their sort of path the greatest animal

968

00:40:29,870 --> 00:40:27,299

of all time is the axolotl it is friend

969

00:40:31,370 --> 00:40:29,880

of the Frog yes it's it's a it's an aunt

970

00:40:33,109 --> 00:40:31,380

Phoebe indefinitely so in Australia

971

00:40:34,730 --> 00:40:33,119

we're most familiar with frogs because

972

00:40:36,799 --> 00:40:34,740

that's all we got in the end a few being

973

00:40:38,480 --> 00:40:36,809

lottery but there are also salamanders

974

00:40:41,240 --> 00:40:38,490

and newts of which the axolotl

975

00:40:43,760 --> 00:40:41,250

is one and there's Sicilians the most

976

00:40:45,859 --> 00:40:43,770

poorly known of the amphibians now

977

00:40:48,049 --> 00:40:45,869

certain the Sicilian which is a great

978

00:40:50,030 --> 00:40:48,059

name for a band or a song where do they

979

00:40:51,140 --> 00:40:50,040

come from and where do they sit on the

980

00:40:53,329 --> 00:40:51,150

evolutionary tree

981

00:40:55,190 --> 00:40:53,339

they're our type of amphibian but they

982

00:40:57,440 --> 00:40:55,200

limb this limbless and they look a lot

983

00:40:58,910 --> 00:40:57,450

like worms so they don't occur in

984

00:41:00,410 --> 00:40:58,920

Australia they occur primarily in the

985

00:41:01,750 --> 00:41:00,420

tropics and they live largely

986

00:41:04,300 --> 00:41:01,760

underground

987

00:41:06,250 --> 00:41:04,310

and so I have spent a lot of my time in

988

00:41:08,770 --> 00:41:06,260

the forest of tropical Southeast Asia

989

00:41:11,260 --> 00:41:08,780

picking up worms thinking is this my

990

00:41:12,970 --> 00:41:11,270

Sicilian and I've only ever seen two

991

00:41:14,440 --> 00:41:12,980

Sicilians in my life because I don't go

992

00:41:15,940 --> 00:41:14,450

digging for them I wait until they come

993

00:41:17,230 --> 00:41:15,950

up on the surface and that's where I see

994

00:41:17,710 --> 00:41:17,240

them but there's some pretty amazing and

995

00:41:19,720 --> 00:41:17,720

fibia ng's

996

00:41:21,400 --> 00:41:19,730

you're talking about Australia and the

997

00:41:22,420 --> 00:41:21,410

evolutionary lottery I thought that we

998

00:41:24,130 --> 00:41:22,430

were an old country because all our

999

00:41:25,810 --> 00:41:24,140

mountains were kind of worn down so I

1000

00:41:27,370 --> 00:41:25,820

thought that would so we've evolved past

1001  
00:41:30,250 --> 00:41:27,380  
amphibians is that why we haven't got

1002  
00:41:31,750 --> 00:41:30,260  
them no we just only got the frogs in

1003  
00:41:34,180 --> 00:41:31,760  
sort of when the continents were all

1004  
00:41:36,040 --> 00:41:34,190  
together we got the frogs and we didn't

1005  
00:41:38,800 --> 00:41:36,050  
get the salamanders and Sicilians hop on

1006  
00:41:41,050 --> 00:41:38,810  
board and so we got an amazing diversity

1007  
00:41:42,430 --> 00:41:41,060  
of frogs especially in in a sort of

1008  
00:41:43,930 --> 00:41:42,440  
things that they do so we've got tree

1009  
00:41:46,240 --> 00:41:43,940  
frogs so things that are genetically

1010  
00:41:47,950 --> 00:41:46,250  
tree frogs that have now adapted to the

1011  
00:41:49,530 --> 00:41:47,960  
drying continent of Australia and spend

1012  
00:41:53,140 --> 00:41:49,540  
most of their life years sometimes

1013  
00:41:57,760 --> 00:41:53,150

underground so water-holding frogs which

1014

00:41:59,740 --> 00:41:57,770

are quite sort of famous actually a big

1015

00:42:02,500 --> 00:41:59,750

frogs that are full of water in their

1016

00:42:04,720 --> 00:42:02,510

bladders so during the just sort of arid

1017

00:42:06,190 --> 00:42:04,730

times for years in the outback these

1018

00:42:08,590 --> 00:42:06,200

things will just be buried underground

1019

00:42:10,960 --> 00:42:08,600

in some a form of cocoon being slightly

1020

00:42:12,730 --> 00:42:10,970

waterproof and and they only come up

1021

00:42:13,960 --> 00:42:12,740

when it absolute pores with rain but

1022

00:42:15,880 --> 00:42:13,970

these are tree frogs things that you

1023

00:42:18,310 --> 00:42:15,890

think you know that should be living in

1024

00:42:19,960 --> 00:42:18,320

trees in the tropics but frogs have done

1025

00:42:22,480 --> 00:42:19,970

some amazing things to adapt to

1026

00:42:24,580 --> 00:42:22,490

Australia as we drifted away from being

1027

00:42:26,080 --> 00:42:24,590

a lot warmer and of course do you get

1028

00:42:28,450 --> 00:42:26,090

many questions about the introduced

1029

00:42:30,100 --> 00:42:28,460

species such as the cane toad now what

1030

00:42:32,200 --> 00:42:30,110

was the cane toad original it was from

1031

00:42:33,790 --> 00:42:32,210

South America and I guess you must hate

1032

00:42:36,220 --> 00:42:33,800

it because like it must cause damage

1033

00:42:37,510 --> 00:42:36,230

among our native frogs doesn't it causes

1034

00:42:41,440 --> 00:42:37,520

a lot of damage particularly for

1035

00:42:43,330 --> 00:42:41,450

predators so our native animals grew up

1036

00:42:45,100 --> 00:42:43,340

or you know evolutionarily have had a

1037

00:42:47,020 --> 00:42:45,110

whole bunch of tasty frogs that didn't

1038

00:42:48,550 --> 00:42:47,030

cause them any harm and they see

1039

00:42:49,990 --> 00:42:48,560

something that looks like a frog a cane

1040

00:42:51,390 --> 00:42:50,000

toad and they've been eating those

1041

00:42:53,890 --> 00:42:51,400

things for their whole you know whole

1042

00:42:55,660 --> 00:42:53,900

evolutionary history and so they think

1043

00:42:56,860 --> 00:42:55,670

obviously I can eat that that's the

1044

00:42:58,750 --> 00:42:56,870

delicious item and then all of a sudden

1045

00:43:01,060 --> 00:42:58,760

these things are poisonous and they're

1046

00:43:02,950 --> 00:43:01,070

not used to things look like frogs that

1047

00:43:03,800 --> 00:43:02,960

are poisonous so that's why they're so

1048

00:43:06,050 --> 00:43:03,810

harmful

1049

00:43:07,670 --> 00:43:06,060

and was it from the cut it's originally

1050

00:43:09,110 --> 00:43:07,680

from South America where's it from here

1051  
00:43:10,010 --> 00:43:09,120  
and what did it loves it's supposed to

1052  
00:43:12,470 --> 00:43:10,020  
eat which it didn't

1053  
00:43:14,810 --> 00:43:12,480  
it was meant to eat the cane beetle so a

1054  
00:43:16,460 --> 00:43:14,820  
past of our cane crops and that's

1055  
00:43:18,470 --> 00:43:16,470  
actually being introduced around the

1056  
00:43:20,660 --> 00:43:18,480  
world but you know I think eyes were

1057  
00:43:21,980 --> 00:43:20,670  
from Hawaii from the cane fields there

1058  
00:43:23,690 --> 00:43:21,990  
they got introduced there first and they

1059  
00:43:25,370 --> 00:43:23,700  
got introduced here and people thought

1060  
00:43:27,830 --> 00:43:25,380  
that they would eat this cane beetle

1061  
00:43:29,180 --> 00:43:27,840  
this cane grub but of course that was

1062  
00:43:30,770 --> 00:43:29,190  
kind of hard they didn't really like

1063  
00:43:32,120 --> 00:43:30,780

having to go to that effort so they ate

1064

00:43:34,640 --> 00:43:32,130

everything else instead and they've

1065

00:43:35,900 --> 00:43:34,650

spread and potentially you would think

1066

00:43:37,790 --> 00:43:35,910

that they would be just adapted to

1067

00:43:39,740 --> 00:43:37,800

living in the tropics but they've they

1068

00:43:41,660 --> 00:43:39,750

seem to be marching on and adapting I

1069

00:43:43,730 --> 00:43:41,670

mean I don't hate them at all because I

1070

00:43:45,620 --> 00:43:43,740

think they're an amazing and phibian

1071

00:43:47,930 --> 00:43:45,630

it's not their fault that they're here

1072

00:43:49,250 --> 00:43:47,940

and they're actually quite amazing and

1073

00:43:52,640 --> 00:43:49,260

Finn's there

1074

00:43:54,110 --> 00:43:52,650

unlike most frogs they're quite smart I

1075

00:43:56,960 --> 00:43:54,120

guess in some ways and they don't rely

1076  
00:43:58,580 --> 00:43:56,970  
on the animal moving in front of their

1077  
00:44:00,260 --> 00:43:58,590  
face for them to eat it so cane toads

1078  
00:44:02,450 --> 00:44:00,270  
have actually been observed eating dog

1079  
00:44:05,300 --> 00:44:02,460  
food out of a dog's bowl and and things

1080  
00:44:07,070 --> 00:44:05,310  
which is super strange for a normal frog

1081  
00:44:09,170 --> 00:44:07,080  
they would never be caught dead doing

1082  
00:44:10,430 --> 00:44:09,180  
something like that so you've got to

1083  
00:44:12,470 --> 00:44:10,440  
give them some credit for being so

1084  
00:44:14,030 --> 00:44:12,480  
adaptable and being dumped in Australia

1085  
00:44:16,550 --> 00:44:14,040  
and then making the best of it for sure

1086  
00:44:18,470 --> 00:44:16,560  
but it is sad to see them in some of

1087  
00:44:21,350 --> 00:44:18,480  
these really amazingly remote places and

1088  
00:44:23,030 --> 00:44:21,360

hearing that things like Kroll's and and

1089

00:44:24,980 --> 00:44:23,040

getting goannas that used to be so

1090

00:44:26,270 --> 00:44:24,990

common in these areas are now so rare

1091

00:44:27,530 --> 00:44:26,280

because they're just not used to

1092

00:44:29,840 --> 00:44:27,540

anything that looks like a frog being

1093

00:44:31,280 --> 00:44:29,850

being poisonous look one things I love

1094

00:44:32,810 --> 00:44:31,290

talking to dr. Jody is there's always

1095

00:44:34,850 --> 00:44:32,820

news in the world of frogs that the rest

1096

00:44:36,230 --> 00:44:34,860

of us kind of miss out what briefly is

1097

00:44:38,930 --> 00:44:36,240

new in the world of frogs that we should

1098

00:44:41,390 --> 00:44:38,940

know about right now there's only been

1099

00:44:43,400 --> 00:44:41,400

discovered recently or something

1100

00:44:45,800 --> 00:44:43,410

I've been reading a fair bit lately

1101  
00:44:48,170 --> 00:44:45,810  
about the chemical compounds that are

1102  
00:44:50,270 --> 00:44:48,180  
being discovered on frog skin so frogs

1103  
00:44:54,050 --> 00:44:50,280  
are essentially like a garden tripping

1104  
00:44:55,370 --> 00:44:54,060  
balls yeah yes lines but frogs have to

1105  
00:44:58,760 --> 00:44:55,380  
protect themselves from getting infected

1106  
00:45:01,790 --> 00:44:58,770  
by bacteria fungi viruses and actually

1107  
00:45:04,850 --> 00:45:01,800  
them the peptides and even the bacteria

1108  
00:45:06,140 --> 00:45:04,860  
on the frog's skin has evolved to kind

1109  
00:45:07,520 --> 00:45:06,150  
of protect them from that so we're

1110  
00:45:09,860 --> 00:45:07,530  
looking at things I like

1111  
00:45:11,600 --> 00:45:09,870  
the foam nests of frogs are being used

1112  
00:45:14,510 --> 00:45:11,610  
as a drug delivery system because they

1113  
00:45:16,430 --> 00:45:14,520

the Bob the bubbles in the foam pop at a

1114

00:45:17,720 --> 00:45:16,440

constant rate so if you can make things

1115

00:45:20,180 --> 00:45:17,730

out of it for human medicine you will

1116

00:45:21,770 --> 00:45:20,190

get a constant drug delivery rate we're

1117

00:45:24,560 --> 00:45:21,780

using the secretions on frog skin

1118

00:45:26,510 --> 00:45:24,570

investigating their use as anti HIV are

1119

00:45:28,730 --> 00:45:26,520

the antiviral antifungal even

1120

00:45:29,330 --> 00:45:28,740

contraceptives so it's sort of one of

1121

00:45:31,700 --> 00:45:29,340

them all

1122

00:45:32,810 --> 00:45:31,710

I guess practical uses of frogs and one

1123

00:45:34,400 --> 00:45:32,820

other reason that we should care about

1124

00:45:35,210 --> 00:45:34,410

their decline there's lots of people

1125

00:45:37,640 --> 00:45:35,220

want to speak to here

1126

00:45:38,870 --> 00:45:37,650

one last question favorite frog in

1127

00:45:43,660 --> 00:45:38,880

popular culture Fred Oh

1128

00:45:45,830 --> 00:45:43,670

Kermit which one Oh Kermit oh yeah yes I

1129

00:45:47,690 --> 00:45:45,840

only play the banjo wouldn't it be great

1130

00:45:49,460 --> 00:45:47,700

if you were in South America you'd trek

1131

00:45:51,410 --> 00:45:49,470

through this forest you'd all dirty and

1132

00:45:58,220 --> 00:45:51,420

then there's a frog playing a banjo

1133

00:45:59,600 --> 00:45:58,230

singing Rainbow Connection yes we do

1134

00:46:06,860 --> 00:45:59,610

have a frog in Australia called the

1135

00:46:08,750 --> 00:46:06,870

eastern banjo frog and that is people

1136

00:46:11,060 --> 00:46:08,760

think it sounds like a banjo so you may

1137

00:46:12,770 --> 00:46:11,070

have a banjo frog in your garden yet Wow

1138

00:46:14,180 --> 00:46:12,780

I think I know the one you're talking

1139

00:46:16,880 --> 00:46:14,190

about that is great is it common in

1140

00:46:18,200 --> 00:46:16,890

urban areas yeah this is probably the

1141

00:46:20,570 --> 00:46:18,210

straight Marsh Road you're thinking of

1142

00:46:22,580 --> 00:46:20,580

which is very closely related and it's

1143

00:46:24,830 --> 00:46:22,590

more like pop Bach like a tennis ball

1144

00:46:25,910 --> 00:46:24,840

being hit and the funniest story I heard

1145

00:46:27,350 --> 00:46:25,920

was someone saying that they thought

1146

00:46:30,080 --> 00:46:27,360

that the tennis court next to their

1147

00:46:32,300 --> 00:46:30,090

house was actually haunted at night as

1148

00:46:34,160 --> 00:46:32,310

they heard games of tennis being played

1149

00:46:37,550 --> 00:46:34,170

in fact it was a stripe marsh frog

1150

00:46:38,630 --> 00:46:37,560

calling to attract females everyone's

1151

00:46:40,070 --> 00:46:38,640

probably got very interested in frogs

1152

00:46:41,960 --> 00:46:40,080

right now so where can we find out more

1153

00:46:43,490 --> 00:46:41,970

at your website where can we go at the

1154

00:46:45,560 --> 00:46:43,500

Australian Museum is the best place and

1155

00:46:47,420 --> 00:46:45,570

I'll write blogs regularly there's one

1156

00:46:49,400 --> 00:46:47,430

coming up about frog sex as well so you

1157

00:46:51,530 --> 00:46:49,410

should probably sort of get online and

1158

00:46:54,420 --> 00:46:51,540

find that one dr. Jody at the Australian

1159

00:46:56,519 --> 00:46:54,430

Museum website thank you

1160

00:46:58,019 --> 00:46:56,529

it's hard to find a scientist tonight

1161

00:47:00,480 --> 00:46:58,029

because everyone's really busy we've got

1162

00:47:02,640 --> 00:47:00,490

a to hear who we got oh my name is Joe

1163

00:47:04,680 --> 00:47:02,650

and I cook and you got your doctorate in

1164

00:47:07,019 --> 00:47:04,690

and we're at I got my doctorate in

1165

00:47:10,170 --> 00:47:07,029

amphibian biology at the University of

1166

00:47:12,299 --> 00:47:10,180

New South Wales I'm into frogs I'm into

1167

00:47:14,640 --> 00:47:12,309

wetlands let's do something wonderful

1168

00:47:15,960 --> 00:47:14,650

and all the people have seen you tonight

1169

00:47:20,069 --> 00:47:15,970

what's been the one question they've

1170

00:47:22,319 --> 00:47:20,079

been asking you about amphibians very

1171

00:47:24,750 --> 00:47:22,329

few questions about amphibians tonight

1172

00:47:26,760 --> 00:47:24,760

mostly beans because I work broadly in

1173

00:47:29,370 --> 00:47:26,770

Murray Darling Basin wetlands and flood

1174

00:47:30,779 --> 00:47:29,380

plains and environmental water so I've

1175

00:47:32,910 --> 00:47:30,789

also done a bit of work these days with

1176

00:47:34,680 --> 00:47:32,920

water birds so had a bit of a few more

1177

00:47:37,440 --> 00:47:34,690

questions about the big waterbird

1178

00:47:39,720 --> 00:47:37,450

breeding events and yeah them so the

1179

00:47:41,339 --> 00:47:39,730

fruit the frogs because they eat the

1180

00:47:42,990 --> 00:47:41,349

water birds but the moment is mostly

1181

00:47:44,460 --> 00:47:43,000

being about water birds I got a question

1182

00:47:51,240 --> 00:47:44,470

for you should we drink the water in

1183

00:47:52,680 --> 00:47:51,250

Adelaide it's kinda it starts up where

1184

00:47:54,420 --> 00:47:52,690

you are and it ends up down there I'm

1185

00:47:56,519 --> 00:47:54,430

just wondering should we be drinking the

1186

00:47:59,970 --> 00:47:56,529

water in Adelaide because it takes funny

1187

00:48:03,210 --> 00:47:59,980

there's no salinated I'm not detailed

1188

00:48:05,460 --> 00:48:03,220

officer rather thing yeah as long as we

1189

00:48:07,589 --> 00:48:05,470

keep the basins and the rivers going in

1190

00:48:09,809 --> 00:48:07,599

the water Ned laid I won't have a bad

1191

00:48:12,960 --> 00:48:09,819

engine but it's been through a lot it's

1192

00:48:17,609 --> 00:48:12,970

a hit a long journey I'm surprised there

1193

00:48:19,349 --> 00:48:17,619

is any water in a delay well have a good

1194

00:48:20,819 --> 00:48:19,359

night here and it you're next to it

1195

00:48:22,170 --> 00:48:20,829

we've got more environmental science

1196

00:48:24,450 --> 00:48:22,180

here who've we got him where'd you get

1197

00:48:27,059 --> 00:48:24,460

your doctorate from I also got my

1198

00:48:29,670 --> 00:48:27,069

doctorate from UNSW I'm there yeah

1199

00:48:32,910 --> 00:48:29,680

Rebecca Swanson um I did my doctorate in

1200

00:48:34,170 --> 00:48:32,920

marine chemical ecology okay does that

1201

00:48:35,519 --> 00:48:34,180

mean you have to do diving and

1202

00:48:37,769 --> 00:48:35,529

everything with it or not you have to

1203

00:48:40,500 --> 00:48:37,779

get into the water a fair bit you do yes

1204

00:48:42,690 --> 00:48:40,510

yes but I did probably over 100 dives

1205

00:48:44,609 --> 00:48:42,700

but I only actually dive to about two to

1206

00:48:46,240 --> 00:48:44,619

three metres so they're not really the

1207

00:48:48,250 --> 00:48:46,250

most interesting dives

1208

00:48:49,599 --> 00:48:48,260

that's where you find a lot of life I

1209

00:48:51,070 --> 00:48:49,609

mean sure there's stuff further down but

1210

00:48:51,910 --> 00:48:51,080

what you're looking at is fairly shallow

1211

00:48:54,250 --> 00:48:51,920

is that correct

1212

00:48:57,430 --> 00:48:54,260

so during yeah I was looking at sea

1213

00:48:59,260 --> 00:48:57,440

urchins and they live in their cult that

1214

00:49:02,200 --> 00:48:59,270

lives just in that first few meters of

1215

00:49:03,820 --> 00:49:02,210

the rocky shelves there so they hide in

1216

00:49:05,170 --> 00:49:03,830

the front they're not this funny ones

1217

00:49:06,880 --> 00:49:05,180

that you step on when you're walking

1218

00:49:09,099 --> 00:49:06,890

around the rock platform they're much

1219

00:49:10,900 --> 00:49:09,109

pretty out ones with little spines that

1220

00:49:11,950 --> 00:49:10,910

wrap themselves up in the seaweed so

1221

00:49:14,620 --> 00:49:11,960

that's what I was looking for

1222

00:49:16,960 --> 00:49:14,630

can we eat seagrass I think we get it

1223

00:49:19,390 --> 00:49:16,970

seaweed can we eat seagrass or as it got

1224

00:49:25,080 --> 00:49:19,400

really nah oh yeah everyone's going here

1225

00:49:30,250 --> 00:49:27,880

cooked in the right fashion okay and it

1226

00:49:32,020 --> 00:49:30,260

was in good water yeah yeah I don't

1227

00:49:33,940 --> 00:49:32,030

think traditionally sea grasses are

1228

00:49:36,280 --> 00:49:33,950

eaten that much but I'm sure you could

1229

00:49:37,900 --> 00:49:36,290

because it doesn't I mean as far as I

1230

00:49:40,870 --> 00:49:37,910

know it doesn't have too many nasty

1231

00:49:42,430 --> 00:49:40,880

chemicals and yeah if it's in healthy

1232

00:49:44,109 --> 00:49:42,440

water then I would just be like some

1233

00:49:45,520 --> 00:49:44,119

other any kind of plant I'm sure you

1234

00:49:47,920 --> 00:49:45,530

could do something something nice with

1235

00:49:49,390 --> 00:49:47,930

it what do we need to do to encourage

1236

00:49:50,980 --> 00:49:49,400

more women to get into science or what

1237

00:49:52,390 --> 00:49:50,990

needs to happen to get more women in

1238

00:49:53,530 --> 00:49:52,400

science I'm looking at two of them here

1239

00:49:55,120 --> 00:49:53,540

that got their doctorates fairly

1240

00:49:57,400 --> 00:49:55,130

successful and I'm sure you've both got

1241

00:49:59,589 --> 00:49:57,410

very high distinction to both of them so

1242

00:50:00,940 --> 00:49:59,599

or do you just just get it you get a

1243

00:50:09,579 --> 00:50:00,950

doctor or you don't it hasn't worked

1244

00:50:10,960 --> 00:50:09,589

there zero or one so what it was the

1245

00:50:12,370 --> 00:50:10,970

professor that kind of got you in the

1246

00:50:14,800 --> 00:50:12,380

person of his teaching that made you

1247

00:50:17,680 --> 00:50:14,810

want to go to that University what did

1248

00:50:19,270 --> 00:50:17,690

you in design to be honest I wasn't

1249

00:50:23,470 --> 00:50:19,280

interested in science during high school

1250

00:50:25,570 --> 00:50:23,480

until I had the best amazing biology

1251  
00:50:28,359 --> 00:50:25,580  
teacher in year 11 and that was it she

1252  
00:50:30,310 --> 00:50:28,369  
she did it for me that was it I was I

1253  
00:50:31,660 --> 00:50:30,320  
was never going to be a scientist I had

1254  
00:50:34,900 --> 00:50:31,670  
no idea what I wanted to be and then she

1255  
00:50:38,020 --> 00:50:34,910  
came along just such you know straight

1256  
00:50:40,990 --> 00:50:38,030  
out of uni very inspiring found my love

1257  
00:50:42,370 --> 00:50:41,000  
of biology and never look back

1258  
00:50:46,359 --> 00:50:42,380  
and where can we find out more about

1259  
00:50:48,130 --> 00:50:46,369  
your work or what you do online it's I'm

1260  
00:50:50,470 --> 00:50:48,140  
actually pretty easy to Google my last

1261  
00:50:52,839 --> 00:50:50,480  
name is pretty obvious there's a few

1262  
00:50:54,430 --> 00:50:52,849  
things on the work office of environment

1263  
00:50:57,640 --> 00:50:54,440

and heritage website about the work that

1264

00:50:59,589 --> 00:50:57,650

I do and I've also just post a few like

1265

00:51:01,000 --> 00:50:59,599

articles about like research papers and

1266

00:51:04,480 --> 00:51:01,010

different things I've done so yeah

1267

00:51:06,430 --> 00:51:04,490

frogs and water another person down

1268

00:51:08,710 --> 00:51:06,440

there Jodi like is it like what's the

1269

00:51:10,690 --> 00:51:08,720

tension within the amphibian world like

1270

00:51:12,010 --> 00:51:10,700

is she really into the vampire frog and

1271

00:51:14,020 --> 00:51:12,020

you like the ones that go up trees how's

1272

00:51:14,650 --> 00:51:14,030

it work oh no we're all just one big

1273

00:51:17,440 --> 00:51:14,660

happy family

1274

00:51:19,180 --> 00:51:17,450

oh okay and where can we find all your

1275

00:51:21,010 --> 00:51:19,190

work online and read about what you do

1276

00:51:22,390 --> 00:51:21,020

well I also work for the office

1277

00:51:24,190 --> 00:51:22,400

environment Heritage and actually I've

1278

00:51:26,290 --> 00:51:24,200

just had a number of reports published

1279

00:51:28,960 --> 00:51:26,300

on the office of Environment website so

1280

00:51:31,870 --> 00:51:28,970

if you just look up hunter River reports

1281

00:51:34,000 --> 00:51:31,880

you'll see them all there thank you any

1282

00:51:35,740 --> 00:51:34,010

advice for anybody in school at the

1283

00:51:37,000 --> 00:51:35,750

moment thinking gee maybe environmental

1284

00:51:39,700 --> 00:51:37,010

science might be my thing

1285

00:51:41,710 --> 00:51:39,710

what's your advice to them well I think

1286

00:51:43,180 --> 00:51:41,720

if you love nature and you love the

1287

00:51:45,160 --> 00:51:43,190

outdoors and you love the environment

1288

00:51:47,079 --> 00:51:45,170

then if you're at all interested in

1289

00:51:49,540 --> 00:51:47,089

science you should keep keep at it

1290

00:51:51,670 --> 00:51:49,550

because I'm very happy with their work

1291

00:51:53,800 --> 00:51:51,680

choices I've made and I've loved every

1292

00:51:55,210 --> 00:51:53,810

job that I've done so I think I'm very

1293

00:51:57,010 --> 00:51:55,220

lucky you know one of the happiest

1294

00:52:02,020 --> 00:51:57,020

scientists I've seen tonight great thank

1295

00:52:03,430 --> 00:52:02,030

you very much hello missed out now what

1296

00:52:04,780 --> 00:52:03,440

have you been looking and doing with the

1297

00:52:06,760 --> 00:52:04,790

scientists here this evening at the

1298

00:52:09,010 --> 00:52:06,770

power house we've just met a blue tongue

1299

00:52:10,810 --> 00:52:09,020

lizard and a shingle back lizard well

1300

00:52:12,040 --> 00:52:10,820

from Toronto Zoo have you ever had any

1301  
00:52:13,530 --> 00:52:12,050  
of them in your backyard the Blue Tongue

1302  
00:52:17,579 --> 00:52:13,540  
lizard occasionally turn up

1303  
00:52:19,660 --> 00:52:17,589  
unfortunately no I live in an apartment

1304  
00:52:22,060 --> 00:52:19,670  
in the elevator they've been known to

1305  
00:52:23,260 --> 00:52:22,070  
turn up so did you learn what you learn

1306  
00:52:25,089 --> 00:52:23,270  
about them cuz it's always great when

1307  
00:52:26,020 --> 00:52:25,099  
you meet these things firsthand and the

1308  
00:52:28,750 --> 00:52:26,030  
people really know what they're talking

1309  
00:52:30,990 --> 00:52:28,760  
about these two particular lizards were

1310  
00:52:32,790 --> 00:52:31,000  
rescue animals

1311  
00:52:34,530 --> 00:52:32,800  
so yeah it was great to see that sronger

1312  
00:52:37,410 --> 00:52:34,540  
tried to release the blue tongue but

1313  
00:52:38,790 --> 00:52:37,420

unfortunately it came back in a cab it

1314

00:52:41,460 --> 00:52:38,800

came back he didn't come back rather

1315

00:52:44,250 --> 00:52:41,470

fast and are you involved in science at

1316

00:52:46,230 --> 00:52:44,260

all no I volunteered for the festival a

1317

00:52:47,309 --> 00:52:46,240

few years ago and so I came along

1318

00:52:49,710 --> 00:52:47,319

tonight and it's been really great

1319

00:52:51,960 --> 00:52:49,720

what's been your favorite scientist have

1320

00:52:54,120 --> 00:52:51,970

you met someone in an error you like I

1321

00:52:56,190 --> 00:52:54,130

haven't met any scientists tonight but

1322

00:52:58,589 --> 00:52:56,200

we did watch the Sherlock Holmes film

1323

00:53:00,660 --> 00:52:58,599

with comedians during the voice-over and

1324

00:53:02,309 --> 00:53:00,670

that was really good oh well thank you

1325

00:53:03,720 --> 00:53:02,319

very much for your time and keep there

1326

00:53:06,150 --> 00:53:03,730

might be a blue tongue in a flat

1327

00:53:09,839 --> 00:53:06,160

wouldn't be a bad thing thank you thank

1328

00:53:11,940 --> 00:53:09,849

you may not hear on the beat and of

1329

00:53:13,410 --> 00:53:11,950

course at any launch you need a DJ in

1330

00:53:14,670 --> 00:53:13,420

the corner playing music but it's not

1331

00:53:16,500 --> 00:53:14,680

really a dance venue it's more like a

1332

00:53:18,690 --> 00:53:16,510

dammit venue who've we got here

1333

00:53:20,940 --> 00:53:18,700

Taylor faints good to speak into your

1334

00:53:22,950 --> 00:53:20,950

cert now what's a crowd are they are

1335

00:53:24,780 --> 00:53:22,960

they a tough one just said a bunch of

1336

00:53:26,670 --> 00:53:24,790

nerds bunch of nerds

1337

00:53:27,839 --> 00:53:26,680

so what do you been playing to them

1338

00:53:29,520 --> 00:53:27,849

you've been playing some stuff with some

1339

00:53:31,640 --> 00:53:29,530

Stephen Hawking samples in there or oh

1340

00:53:34,829 --> 00:53:31,650

yeah just some out-of-this-world music

1341

00:53:36,000 --> 00:53:34,839

tell me a corporate events like the it's

1342

00:53:37,589 --> 00:53:36,010

a nasty one because you can have people

1343

00:53:39,180 --> 00:53:37,599

coming up and asking him has anyone

1344

00:53:43,620 --> 00:53:39,190

requested anything tonight

1345

00:53:46,800 --> 00:53:43,630

I know requests a dream gig you turn up

1346

00:53:48,150 --> 00:53:46,810

yeah play the stuff and you go home well

1347

00:53:51,390 --> 00:53:48,160

done so what's been your favorite track

1348

00:53:53,819 --> 00:53:51,400

they've kind of slipped in there some a

1349

00:53:56,579 --> 00:53:53,829

fixed twin maybe no no effects in maybe

1350

00:53:57,930 --> 00:53:56,589

Bowie's Space Oddity they would have

1351  
00:54:00,150 --> 00:53:57,940  
loved that one look have a good night

1352  
00:54:01,410 --> 00:54:00,160  
enjoy the eggs I reckon up nerds top

1353  
00:54:04,380 --> 00:54:01,420  
crowd the work too easy

1354  
00:54:07,200 --> 00:54:05,940  
well we're heading off never cheating

1355  
00:54:09,960 --> 00:54:07,210  
has been a good night the winner tonight

1356  
00:54:12,930 --> 00:54:09,970  
has been science winner tonight has been

1357  
00:54:14,280 --> 00:54:12,940  
science it's been fabulous it's it's

1358  
00:54:15,780 --> 00:54:14,290  
late there's still lots of people

1359  
00:54:18,660 --> 00:54:15,790  
looking at the science here at the

1360  
00:54:24,130 --> 00:54:18,670  
powerhouse museum a great success I

1361  
00:54:24,140 --> 00:54:29,740  
[Music]

1362  
00:54:40,660 --> 00:54:36,590  
on Maynard kaamdard you welcome to bunga

1363  
00:54:42,800 --> 00:54:40,670

bunga 39 39 episodes 39 events 39

1364

00:54:44,570 --> 00:54:42,810

cataclysm errs we the show the

1365

00:54:46,850 --> 00:54:44,580

challenges the government the God and

1366

00:54:51,500 --> 00:54:46,860

your very self on today's show you'll

1367

00:54:55,540 --> 00:54:51,510

hear Angela here we all managed to get

1368

00:55:00,140 --> 00:54:58,580

and two more we hear from you well we

1369

00:55:05,180 --> 00:55:00,150

won't be talking about this you're a

1370

00:55:13,240 --> 00:55:05,190

selfish arrogant Paul Maynard calm Donna

1371

00:55:24,440 --> 00:55:13,250

you are you

1372

00:55:28,980 --> 00:55:26,760

thank you for listening to the skeptic

1373

00:55:30,660 --> 00:55:28,990

zone this week and as I mentioned at the

1374

00:55:31,800 --> 00:55:30,670

top of the show I do have an important

1375

00:55:35,670 --> 00:55:31,810

announcement to make

1376

00:55:38,850 --> 00:55:35,680

a bit of a sad one I'm afraid a couple

1377

00:55:41,250 --> 00:55:38,860

of weeks ago I was in San Francisco I

1378

00:55:43,940 --> 00:55:41,260

went to the Exploratorium and you may

1379

00:55:46,560 --> 00:55:43,950

remember I interviewed dr. Paul Doherty

1380

00:55:49,020 --> 00:55:46,570

who wrote the book and then you did a

1381

00:55:51,660 --> 00:55:49,030

scientific exploration of the world's

1382

00:55:53,760 --> 00:55:51,670

most interesting ways to die Paul took

1383

00:55:57,170 --> 00:55:53,770

me on a personal tour of the

1384

00:56:00,690 --> 00:55:57,180

Exploratorium he was just the most

1385

00:56:03,960 --> 00:56:00,700

amazingly interesting man a bundle of

1386

00:56:05,850 --> 00:56:03,970

energy enthusiasm for science and

1387

00:56:09,480 --> 00:56:05,860

science education like I've rarely seen

1388

00:56:12,750 --> 00:56:09,490

and so you can imagine how sad I was to

1389

00:56:15,810 --> 00:56:12,760

hear just a couple of days ago that Paul

1390

00:56:20,460 --> 00:56:15,820

has died and I'm very shocked and

1391

00:56:24,180 --> 00:56:20,470

saddened to hear this I'm grateful for

1392

00:56:27,300 --> 00:56:24,190

Paul for his time and I'm so glad I got

1393

00:56:29,760 --> 00:56:27,310

to meet him and interview him and spend

1394

00:56:33,360 --> 00:56:29,770

time with him in at the Exploratorium as

1395

00:56:35,190 --> 00:56:33,370

he took me around and was so so happy to

1396

00:56:37,880 --> 00:56:35,200

show me all the experiments and the

1397

00:56:40,200 --> 00:56:37,890

tests and and the wonderful things there

1398

00:56:43,350 --> 00:56:40,210

so a great loss to the scientific

1399

00:56:45,600 --> 00:56:43,360

community if you want to relive some of

1400

00:56:48,660 --> 00:56:45,610

the magic and enthusiasm that Paul had

1401  
00:56:52,800 --> 00:56:48,670  
you can hear that adventure on skeptic

1402  
00:56:55,950 --> 00:56:52,810  
Zone number 453 from the 25th of June

1403  
00:56:59,690 --> 00:56:55,960  
2017 sad news indeed but on the the

1404  
00:57:03,410 --> 00:56:59,700  
positive side he lived a good life and

1405  
00:57:05,520 --> 00:57:03,420  
he was a champion of science education

1406  
00:57:08,550 --> 00:57:05,530  
coming up on next week's show

1407  
00:57:10,220 --> 00:57:08,560  
Maynard and I perform for National

1408  
00:57:13,020 --> 00:57:10,230  
Science Week at the Australian Museum

1409  
00:57:14,940 --> 00:57:13,030  
doing the mystery investigators a little

1410  
00:57:16,290 --> 00:57:14,950  
bit of behind the scenes and a bit of

1411  
00:57:19,440 --> 00:57:16,300  
the fun of the mystery investigators

1412  
00:57:21,900 --> 00:57:19,450  
show also Iran sir give with his grain

1413  
00:57:23,940 --> 00:57:21,910

of salt segment catches up with Cara

1414

00:57:26,880 --> 00:57:23,950

Santa Maria from the skeptics guide to

1415

00:57:30,300 --> 00:57:26,890

the universe and the lucky dog he's also

1416

00:57:33,360 --> 00:57:30,310

right now I believe right now or in the

1417

00:57:36,000 --> 00:57:33,370

next few hours he will also be in the

1418

00:57:39,000 --> 00:57:36,010

path of totality for the

1419

00:57:41,010 --> 00:57:39,010

the solar eclipse it's fascinating to

1420

00:57:42,540 --> 00:57:41,020

think now that if I walk outside and

1421

00:57:44,700 --> 00:57:42,550

find the moon I'm not sure if I can I

1422

00:57:46,320 --> 00:57:44,710

don't know if at up or down I can

1423

00:57:48,900 --> 00:57:46,330

certainly see the Sun that's shining

1424

00:57:51,870 --> 00:57:48,910

it's fascinating to think that science

1425

00:57:54,150 --> 00:57:51,880

knows that the moon is going to cross

1426

00:57:59,010 --> 00:57:54,160

over the face of the Sun to the

1427

00:58:00,570 --> 00:57:59,020

millisecond and not only now but in in

1428

00:58:02,700 --> 00:58:00,580

years to come as we were mentioning

1429

00:58:05,220 --> 00:58:02,710

earlier with Evan Bernstein there is a

1430

00:58:09,240 --> 00:58:05,230

solar eclipse a total eclipse going to

1431

00:58:10,470 --> 00:58:09,250

go right over Sydney Australia and I

1432

00:58:13,770 --> 00:58:10,480

wonder if I'll still be doing the

1433

00:58:17,359 --> 00:58:13,780

skeptic sown in 2028 July the 22nd a

1434

00:58:21,180 --> 00:58:17,369

total solar eclipse will occur and

1435

00:58:25,470 --> 00:58:21,190

Sydney will be effectively blotted out

1436

00:58:26,280 --> 00:58:25,480

from the Sun around about 4 o'clock in

1437

00:58:28,470 --> 00:58:26,290

the afternoon

1438

00:58:30,630 --> 00:58:28,480

well Sydneysiders that's something to

1439

00:58:33,240 --> 00:58:30,640

look forward to but until then or at

1440

00:58:40,140 --> 00:58:33,250

least next week this is Richard Saunders

1441

00:58:41,760 --> 00:58:40,150

signing off from Sydney Australia you've

1442

00:58:45,780 --> 00:58:41,770

been listening to the skeptic zone

1443

00:58:48,660 --> 00:58:45,790

podcast visit our website at WWF tags on

1444

00:58:52,530 --> 00:58:48,670

TV for contacts an archive of all

1445

00:58:54,840 --> 00:58:52,540

episodes since 2008 and our online store

1446

00:58:57,560 --> 00:58:54,850

please support the skeptic zone by

1447

00:59:00,570 --> 00:58:57,570

following us on Twitter at skeptic zone

1448

00:59:03,599 --> 00:59:00,580

liking us on Facebook and leaving a

1449

00:59:06,480 --> 00:59:03,609

review on iTunes you can also show your

1450

00:59:09,960 --> 00:59:06,490

support by subscribing via PayPal for as

1451

00:59:12,300 --> 00:59:09,970

little as 99 cents a week the skeptic

1452

00:59:14,099 --> 00:59:12,310

zone is an independent production the

1453

00:59:16,230 --> 00:59:14,109

views and opinions expressed on the

1454

00:59:18,420 --> 00:59:16,240

sceptic zone are not necessarily those