

1
00:00:00,560 --> 00:00:07,230
sadi in 10 minutes time mr. investigator

2
00:00:04,349 --> 00:00:10,050
show at the entire gallery bed of nails

3
00:00:07,230 --> 00:00:12,630
for dividing bit of magic urbanspoon

4
00:00:10,050 --> 00:00:17,450
baby birds and mysteries the mystery

5
00:00:12,630 --> 00:00:17,450
mystery show starting in 10 minutes time

6
00:00:21,920 --> 00:00:29,660
welcome to the skeptic zone the podcast

7
00:00:25,079 --> 00:00:29,659
from Australia for science and reason

8
00:00:38,009 --> 00:00:44,579
hello and welcome to the skeptics are in

9
00:00:40,509 --> 00:00:47,890
episode number 307 for the sixth of

10
00:00:44,579 --> 00:00:51,100
September it's Father's Day your goose

11
00:00:47,890 --> 00:00:53,018
that's Maynard and Joe alabaster he

12
00:00:51,100 --> 00:00:55,030
would be helping me remembering the

13
00:00:53,018 --> 00:00:57,308
month it is at the powerhouse museum

14
00:00:55,030 --> 00:00:59,739
where Maynard and I are in the middle of

15
00:00:57,308 --> 00:01:01,299
a run of the mystery investigators we

16
00:00:59,738 --> 00:01:02,859
have I had never done the show before

17
00:01:01,299 --> 00:01:04,390
thursday night and i've done nine of

18
00:01:02,859 --> 00:01:05,829
them already and twice we've found

19
00:01:04,390 --> 00:01:08,320
people that have found the water twice

20
00:01:05,829 --> 00:01:09,849
dividing richard in a row that's true

21
00:01:08,319 --> 00:01:11,079
isn't that interesting because we did

22
00:01:09,849 --> 00:01:13,269
the water divining would you better now

23
00:01:11,079 --> 00:01:15,399
spoon bending some optical illusions but

24
00:01:13,269 --> 00:01:17,319
you and i have taken some time out here

25
00:01:15,399 --> 00:01:19,118
at the Museum we've run around we've

26
00:01:17,319 --> 00:01:20,739
looked at exhibitions and the other

27
00:01:19,118 --> 00:01:22,929
night we were here performing when they

28
00:01:20,739 --> 00:01:24,819
had their sex night that's right they

29

00:01:22,929 --> 00:01:27,009
were we were working blue here at the

30
00:01:24,819 --> 00:01:28,959
powerhouse museum it was an adult show

31
00:01:27,009 --> 00:01:30,609
talking about reproduction dr. Cole's

32
00:01:28,959 --> 00:01:31,719
talking about his favorite organ which

33
00:01:30,609 --> 00:01:34,868
you'll find out a bit later in the show

34
00:01:31,719 --> 00:01:36,250
it was pretty spooky it was very spooky

35
00:01:34,868 --> 00:01:38,349
and it was at a distance and quite

36
00:01:36,250 --> 00:01:40,840
closing up which means that this week we

37
00:01:38,349 --> 00:01:42,848
have too many nods spooky actions at a

38
00:01:40,840 --> 00:01:45,640
distance we kick off with the powerhouse

39
00:01:42,849 --> 00:01:46,810
spooky actions we have a break which is

40
00:01:45,640 --> 00:01:48,250
our good friends at the Royal

41
00:01:46,810 --> 00:01:50,289
Institution of Australia with their week

42
00:01:48,250 --> 00:01:52,209
in science following that it's it's

43
00:01:50,289 --> 00:01:54,429

Maynard spooky action at a distance part

44

00:01:52,209 --> 00:01:56,739

two where am I this time Richard may not

45

00:01:54,429 --> 00:01:58,299

at the pub oh that's right i had a good

46

00:01:56,739 --> 00:02:00,459

chat to everybody at skeptics at the pub

47

00:01:58,299 --> 00:02:02,769

now everybody remember it's the first

48

00:02:00,459 --> 00:02:04,209

thursday of every month in sydney put it

49

00:02:02,769 --> 00:02:05,920

in your calendar right now first

50

00:02:04,209 --> 00:02:07,530

thursday every month in sydney get along

51

00:02:05,920 --> 00:02:09,729

course we had some great chat about

52

00:02:07,530 --> 00:02:11,500

amphibians i spoke to someone who was

53

00:02:09,729 --> 00:02:13,239

tripping balls because they accidentally

54

00:02:11,500 --> 00:02:15,669

ate part of a frog you wouldn't want to

55

00:02:13,239 --> 00:02:17,620

miss it but you also chat to pub goers

56

00:02:15,669 --> 00:02:20,049

enjoy your you're there to you have a

57

00:02:17,620 --> 00:02:22,180

chat to Maynard about why we still need

58
00:02:20,050 --> 00:02:24,370
skeptics really yeah why this skeptic

59
00:02:22,180 --> 00:02:26,020
carrion still needed in the year 2014

60
00:02:24,370 --> 00:02:28,930
why we'll can't just have a good lie

61
00:02:26,020 --> 00:02:31,180
down on a bed of nails on a bed of nails

62
00:02:28,930 --> 00:02:32,800
with people watching that's what we've

63
00:02:31,180 --> 00:02:34,900
been doing well listen the three of us

64
00:02:32,800 --> 00:02:36,849
why we race out stairs go to the cafe

65
00:02:34,900 --> 00:02:38,200
and have a nice I'll why don't know

66
00:02:36,848 --> 00:02:41,348
chocolate chip cookie does that sound

67
00:02:38,199 --> 00:02:43,119
all right yeah that's fine may not look

68
00:02:41,348 --> 00:02:45,429
I've lost all interest in this vitamin K

69
00:02:43,120 --> 00:02:48,520
I'm going to find something else well

70
00:02:45,430 --> 00:02:51,060
well we did that I hope you enjoy the

71
00:02:48,520 --> 00:02:51,060
skeptic zone

72
00:03:04,319 --> 00:03:11,870
here's my not spooky action at the

73
00:03:09,520 --> 00:03:14,659
distance

74
00:03:11,870 --> 00:03:17,239
I'm sitting with Tilly here in the

75
00:03:14,658 --> 00:03:19,639
exciting Hall of Kung Fu Lego i call it

76
00:03:17,239 --> 00:03:22,759
kung fu Lego because children can build

77
00:03:19,639 --> 00:03:24,500
houses here at the powerhouse out of

78
00:03:22,759 --> 00:03:25,548
Lego type substances and then come

79
00:03:24,500 --> 00:03:27,289
through it down and have a great time

80
00:03:25,549 --> 00:03:29,450
tell you what are you doing y'all are

81
00:03:27,289 --> 00:03:31,489
you doing it what am i doing I'm causing

82
00:03:29,449 --> 00:03:33,919
trouble wherever possible and guiding

83
00:03:31,489 --> 00:03:36,140
people to it as well and what your role

84
00:03:33,919 --> 00:03:38,059
here at the powerhouse I'm the education

85
00:03:36,139 --> 00:03:41,000
manager here at the Museum and I'm also

86

00:03:38,060 --> 00:03:44,060
deeply involved with the ultimos Science

87
00:03:41,000 --> 00:03:45,318
Festival which is happening right now ok

88
00:03:44,060 --> 00:03:47,390
whatever happened to the Chippendale

89
00:03:45,318 --> 00:03:50,060
Science Festival it used to be really

90
00:03:47,389 --> 00:03:51,768
really quite highly regarded but just

91
00:03:50,060 --> 00:03:52,939
disappeared and the Newtown science

92
00:03:51,769 --> 00:03:54,500
festivals right out of the park you

93
00:03:52,939 --> 00:03:56,150
don't do about that at all no we had

94
00:03:54,500 --> 00:03:58,430
them both killed off actually like them

95
00:03:56,150 --> 00:04:01,219
yeah what's been the highlight so far we

96
00:03:58,430 --> 00:04:03,049
are only on Saturday goodness me I would

97
00:04:01,219 --> 00:04:05,539
I mean there's so many it's hard we had

98
00:04:03,049 --> 00:04:08,000
the science of sex on Friday night which

99
00:04:05,539 --> 00:04:09,709
you were at as well of course was it I

100
00:04:08,000 --> 00:04:11,120

thought it was a science of sexting in

101

00:04:09,709 --> 00:04:12,979

which case I thought correct spelling

102

00:04:11,120 --> 00:04:14,569

was the important thing but no dr. Carl

103

00:04:12,979 --> 00:04:16,728

was telling about his favorite organ

104

00:04:14,568 --> 00:04:19,579

which was the uterus the uterus is a

105

00:04:16,728 --> 00:04:22,098

fascinating creature if I may say within

106

00:04:19,579 --> 00:04:24,199

we've been a female it does the most

107

00:04:22,098 --> 00:04:25,819

amazing things it's so adaptable much

108

00:04:24,199 --> 00:04:27,500

like women themselves i'll have you know

109

00:04:25,819 --> 00:04:30,978

that looks like that that's that's good

110

00:04:27,500 --> 00:04:32,569

power power doesn't tell us what they

111

00:04:30,978 --> 00:04:34,519

think to the stuff you could get to get

112

00:04:32,569 --> 00:04:35,719

out on that night that wasn't you

113

00:04:34,519 --> 00:04:38,569

wouldn't normally get out because it was

114

00:04:35,720 --> 00:04:39,889

an adult show it was indeed a lot of the

115
00:04:38,569 --> 00:04:42,288
things happening in the ultimate Science

116
00:04:39,889 --> 00:04:44,329
Festival there we have quite a number of

117
00:04:42,288 --> 00:04:46,759
adults only events as well as family

118
00:04:44,329 --> 00:04:48,589
events so happening right now at the

119
00:04:46,759 --> 00:04:51,199
museum on saturday and sunday is the

120
00:04:48,589 --> 00:04:53,119
family science weekend and that's where

121
00:04:51,199 --> 00:04:56,150
we basically have taken over the whole

122
00:04:53,120 --> 00:04:59,538
museum with hands-on science exhibits

123
00:04:56,149 --> 00:05:00,978
shows like the mystery investigators the

124
00:04:59,538 --> 00:05:03,829
building is full of science

125
00:05:00,978 --> 00:05:05,509
communicators that's right how many

126
00:05:03,829 --> 00:05:07,668
science communicators does it take to

127
00:05:05,509 --> 00:05:09,709
run a science festival turns out all of

128
00:05:07,668 --> 00:05:11,538
them in sydney they're all here it's an

129
00:05:09,709 --> 00:05:13,489
excellent day and peeled and bringing

130
00:05:11,538 --> 00:05:15,228
their kids along and it looked people

131
00:05:13,490 --> 00:05:16,848
been pointing poking and making a lot of

132
00:05:15,228 --> 00:05:18,978
noise that's right dressing up

133
00:05:16,848 --> 00:05:21,500
photographing but what's been the

134
00:05:18,978 --> 00:05:23,180
surprise hit up the mystery

135
00:05:21,500 --> 00:05:24,670
investigators of course I mean not

136
00:05:23,180 --> 00:05:26,410
really a surprise though is a

137
00:05:24,670 --> 00:05:27,730
that the bed of nails since I haven't

138
00:05:26,410 --> 00:05:30,310
done this show before had Richard the

139
00:05:27,730 --> 00:05:32,500
bed of nails and I've done five or six

140
00:05:30,310 --> 00:05:33,730
shows with Richard and twice now someone

141
00:05:32,500 --> 00:05:35,139
has actually found the water in the

142
00:05:33,730 --> 00:05:37,780
water to boiling that should be one in

143

00:05:35,139 --> 00:05:40,060
six and it's been like two in six can I

144
00:05:37,779 --> 00:05:41,949
say I was brought up as a participant in

145
00:05:40,060 --> 00:05:43,629
the water divining and what was a

146
00:05:41,949 --> 00:05:46,079
surprise to me was as I was standing

147
00:05:43,629 --> 00:05:49,779
ready to walk across I was actually

148
00:05:46,079 --> 00:05:51,579
nervous my mind went into oh I hope I

149
00:05:49,779 --> 00:05:54,159
get this right am I gonna get it right I

150
00:05:51,579 --> 00:05:55,839
hope I find the water because at this

151
00:05:54,160 --> 00:05:59,770
stage listener you should google the

152
00:05:55,839 --> 00:06:01,959
ideomotor effect hmm so I found that

153
00:05:59,769 --> 00:06:03,759
quite interesting of my own reaction I

154
00:06:01,959 --> 00:06:05,529
didn't expect well how much more we got

155
00:06:03,759 --> 00:06:06,579
the festival on here people too late to

156
00:06:05,529 --> 00:06:08,049
catch up on other they going to be

157
00:06:06,579 --> 00:06:10,089

crying in there because they'd missed

158

00:06:08,050 --> 00:06:12,699

this great science festival absolutely

159

00:06:10,089 --> 00:06:14,649

not it doesn't end until friday the 12th

160

00:06:12,699 --> 00:06:16,750

this friday and there are things on

161

00:06:14,649 --> 00:06:18,429

every single day during the day and the

162

00:06:16,750 --> 00:06:21,069

night you can come in and have a curated

163

00:06:18,430 --> 00:06:23,560

tour here at the powerhouse museum of

164

00:06:21,069 --> 00:06:24,849

our new exhibition interface that's

165

00:06:23,560 --> 00:06:27,160

happening on monday tuesday wednesday

166

00:06:24,850 --> 00:06:29,320

and what's going on the interfaces are

167

00:06:27,160 --> 00:06:31,090

the changing face of computer fields

168

00:06:29,319 --> 00:06:33,159

what is it yeah it's looking at that

169

00:06:31,089 --> 00:06:35,229

interface between humans and our

170

00:06:33,160 --> 00:06:37,870

machines and looking at some of the

171

00:06:35,230 --> 00:06:40,030

iconic brands and the innovations that

172
00:06:37,870 --> 00:06:41,800
have happened over the last couple of

173
00:06:40,029 --> 00:06:43,959
hundred years i think i saw an apple

174
00:06:41,800 --> 00:06:47,410
newton in that showcase is that right

175
00:06:43,959 --> 00:06:48,759
yes i had two of them he did you can

176
00:06:47,410 --> 00:06:51,250
come and take a trip down memory lane

177
00:06:48,759 --> 00:06:52,629
that's great and no more time you open

178
00:06:51,250 --> 00:06:55,509
and when can people get here and how can

179
00:06:52,629 --> 00:06:58,930
they check it out online it is from ten

180
00:06:55,509 --> 00:07:00,759
a.m. until 5pm the curator tour itself i

181
00:06:58,930 --> 00:07:02,410
believe is that noon and people can

182
00:07:00,759 --> 00:07:04,389
check out everything that's happening at

183
00:07:02,410 --> 00:07:06,760
the festival at ultimo science festival

184
00:07:04,389 --> 00:07:09,129
com it's one place you won't get in too

185
00:07:06,759 --> 00:07:11,139
much trouble for asking questions that's

186
00:07:09,129 --> 00:07:14,980
right there are no dumb questions only

187
00:07:11,139 --> 00:07:16,889
strange people filled with it this place

188
00:07:14,980 --> 00:07:19,890
is buildable

189
00:07:16,889 --> 00:07:19,889
haha

190
00:07:23,810 --> 00:07:28,379
we're here at the powerhouse museum

191
00:07:25,920 --> 00:07:30,120
demonstrating some science for their sex

192
00:07:28,379 --> 00:07:32,639
and science night what are you here for

193
00:07:30,120 --> 00:07:34,709
you perv ah to learn about sex but

194
00:07:32,639 --> 00:07:35,909
what's your favorite organ I mean dr.

195
00:07:34,709 --> 00:07:39,180
cars can be talking about the uterus

196
00:07:35,910 --> 00:07:40,800
what have you got going oh I think the

197
00:07:39,180 --> 00:07:42,120
uterus is actually quite a good one is

198
00:07:40,800 --> 00:07:43,410
where we all come from yeah it's pretty

199
00:07:42,120 --> 00:07:45,689
hard to beat what's your name sir

200

00:07:43,410 --> 00:07:47,100
Lachlan and you're going to tell us a

201
00:07:45,689 --> 00:07:49,139
story that could be a bit spooky or it

202
00:07:47,100 --> 00:07:52,710
could just be an example of big data in

203
00:07:49,139 --> 00:07:54,959
effect mmm acabei yes listening to one

204
00:07:52,709 --> 00:07:57,899
of your interviews quite some time ago

205
00:07:54,959 --> 00:08:01,349
waiting at the station and who got off

206
00:07:57,899 --> 00:08:03,689
the train it was you was it definitely

207
00:08:01,350 --> 00:08:06,060
me it was definitely you yes absolutely

208
00:08:03,689 --> 00:08:07,589
undeniable then I was affecting that

209
00:08:06,060 --> 00:08:09,750
Maynard I don't know really what I'm

210
00:08:07,589 --> 00:08:12,329
doing on public transport look unless it

211
00:08:09,750 --> 00:08:13,860
was your evil twin oh well look he gets

212
00:08:12,329 --> 00:08:15,629
around and frankly he's got a better job

213
00:08:13,860 --> 00:08:17,040
than I've ever had are you got quite a

214
00:08:15,629 --> 00:08:19,019

distinctive face and I mean that in a

215

00:08:17,040 --> 00:08:20,490

good way ok I love you knit in the good

216

00:08:19,019 --> 00:08:22,169

way there well that's great that's

217

00:08:20,490 --> 00:08:24,000

amazing now that is the what they call

218

00:08:22,170 --> 00:08:26,189

it the law of large numbers i believe is

219

00:08:24,000 --> 00:08:29,189

what they say is coincidence yes every

220

00:08:26,189 --> 00:08:31,170

day I catch a train so inevitable that

221

00:08:29,189 --> 00:08:33,360

you would at least be on that train at

222

00:08:31,170 --> 00:08:34,860

least once although i really go to win

223

00:08:33,360 --> 00:08:36,659

you'd station you'd normally find me

224

00:08:34,860 --> 00:08:38,399

catching off hopping off somewhere at

225

00:08:36,659 --> 00:08:41,129

central or maybe in the hunter but

226

00:08:38,399 --> 00:08:43,740

really we need so that is statistically

227

00:08:41,129 --> 00:08:45,779

unlikely but not impossible hmm it's

228

00:08:43,740 --> 00:08:47,159

plausible mmm and you are only one of

229
00:08:45,779 --> 00:08:49,799
the three listeners to the show too so

230
00:08:47,159 --> 00:08:52,019
that that's a fairly low number I don't

231
00:08:49,799 --> 00:08:53,939
say that no I I know at least three

232
00:08:52,019 --> 00:08:55,529
people who do listen to it so let me

233
00:08:53,940 --> 00:08:57,600
just double dare you have fun and don't

234
00:08:55,529 --> 00:08:59,459
heckle dr. Karl I'll try not to because

235
00:08:57,600 --> 00:09:01,590
he's come back so I'll cut you all right

236
00:08:59,460 --> 00:09:04,610
yeah that's true that's true I'll avoid

237
00:09:01,590 --> 00:09:04,610
him thank you very much

238
00:09:08,730 --> 00:09:13,210
we're here at the powerhouse museum

239
00:09:10,539 --> 00:09:15,459
looking at the Russian space suit it

240
00:09:13,210 --> 00:09:18,580
looks agricultural and very utilitarian

241
00:09:15,460 --> 00:09:20,470
none of this fancy nancy pansy nasa

242
00:09:18,580 --> 00:09:22,389
stuff for those guys may not you know

243
00:09:20,470 --> 00:09:24,670
I'm looking at this this old Russian

244
00:09:22,389 --> 00:09:27,159
space suits real one and it's just

245
00:09:24,669 --> 00:09:32,049
struck me how can something space-aged

246
00:09:27,159 --> 00:09:33,909
look antiquated it's it's it's insane I

247
00:09:32,049 --> 00:09:36,279
mean it really does look like an

248
00:09:33,909 --> 00:09:38,319
old-fashioned space suit but that sounds

249
00:09:36,279 --> 00:09:39,759
like a contradiction yeah but it looked

250
00:09:38,320 --> 00:09:41,890
ittle bit looks looks pretty rugged but

251
00:09:39,759 --> 00:09:43,720
it looks rugged as they have to be you

252
00:09:41,889 --> 00:09:46,629
just always think of the space suit as

253
00:09:43,720 --> 00:09:48,700
being white and like you know clean and

254
00:09:46,629 --> 00:09:49,899
but it probably stinks up a storm once

255
00:09:48,700 --> 00:09:52,750
you've been in one for a couple of hours

256
00:09:49,899 --> 00:09:55,029
no doubt well this one it's discolored

257

00:09:52,750 --> 00:09:57,250
somewhat but yeah there is a real

258
00:09:55,029 --> 00:09:59,079
splashing of Russian it's a real

259
00:09:57,250 --> 00:10:00,370
splashing spaceship and it smelled proof

260
00:09:59,080 --> 00:10:01,780
glass because I reckon if you got close

261
00:10:00,370 --> 00:10:03,639
to that space suit it would smell a

262
00:10:01,779 --> 00:10:05,740
vodka and prawns and look at the

263
00:10:03,639 --> 00:10:09,009
comparison here we've got a jumpsuit as

264
00:10:05,740 --> 00:10:11,980
one by one of the astronauts on the

265
00:10:09,009 --> 00:10:14,080
space shuttle and very clean and attract

266
00:10:11,980 --> 00:10:16,930
tracksuit pants as worn on the space

267
00:10:14,080 --> 00:10:19,990
shuttle too so it's station casual wear

268
00:10:16,929 --> 00:10:21,879
yeah I mean none of this onesie nonsense

269
00:10:19,990 --> 00:10:23,740
if you're going to be flying around in

270
00:10:21,879 --> 00:10:26,019
space at tens of thousands of kilometers

271
00:10:23,740 --> 00:10:27,399

an hour no no you have to look the part

272

00:10:26,019 --> 00:10:30,309

don't you that looks like something from

273

00:10:27,399 --> 00:10:34,110

space 1999 it also looks like something

274

00:10:30,309 --> 00:10:36,099

you might have worn to a rave in 1999

275

00:10:34,110 --> 00:10:39,370

we're in the part of the powerhouse

276

00:10:36,100 --> 00:10:41,230

museum where it's the idea is to show

277

00:10:39,370 --> 00:10:42,789

you how the disorientation of space can

278

00:10:41,230 --> 00:10:44,200

occur Richard how would you explain what

279

00:10:42,789 --> 00:10:46,509

we're looking at here I can't see any of

280

00:10:44,200 --> 00:10:48,460

the children vomiting yet just wait man

281

00:10:46,509 --> 00:10:50,379

out they will it's a tube you're walking

282

00:10:48,460 --> 00:10:52,540

into a tube and it's made out of like

283

00:10:50,379 --> 00:10:54,759

perspex and on the outside of the tube

284

00:10:52,539 --> 00:10:56,049

there's a rotating room so once you're

285

00:10:54,759 --> 00:10:58,958

in the tube you're looking

286
00:10:56,049 --> 00:11:00,519
the room rotating around you you lose

287
00:10:58,958 --> 00:11:02,649
all sense of what's up and what's down

288
00:11:00,519 --> 00:11:05,289
and you start to fall people start to

289
00:11:02,649 --> 00:11:06,940
lean and fall over let's show we entered

290
00:11:05,289 --> 00:11:09,639
them I think we should walk into it here

291
00:11:06,940 --> 00:11:14,019
they've got a bit of an auditory

292
00:11:09,639 --> 00:11:17,439
commentary going in the background looks

293
00:11:14,019 --> 00:11:19,509
like we're tilting it this way it does

294
00:11:17,440 --> 00:11:22,329
doesn't have it's rather upsetting it

295
00:11:19,509 --> 00:11:23,919
could lead to motion sickness I think I

296
00:11:22,328 --> 00:11:25,599
know where they got I think they got the

297
00:11:23,919 --> 00:11:27,939
ideas from is it I've been to some

298
00:11:25,600 --> 00:11:29,409
parties like this have you yeah I think

299
00:11:27,940 --> 00:11:32,019
they got the idea from this from one of

300
00:11:29,409 --> 00:11:33,429
Frank Sinatra's sixties parties so we

301
00:11:32,019 --> 00:11:35,289
stare at the end of the wall keep

302
00:11:33,429 --> 00:11:37,179
staring and what's happening it's still

303
00:11:35,289 --> 00:11:42,819
and we're moving right mmm but we're not

304
00:11:37,179 --> 00:11:45,088
wit perfectly stationary this is really

305
00:11:42,820 --> 00:11:48,010
trippy I'm kind of enjoying this good

306
00:11:45,089 --> 00:12:06,880
can you get one of these for huh yeah

307
00:11:48,009 --> 00:12:08,828
it's called a washing machine that's the

308
00:12:06,879 --> 00:12:10,539
Apollo 11 moon landing that reminds me

309
00:12:08,828 --> 00:12:12,219
we must talk to our arrow engineer

310
00:12:10,539 --> 00:12:14,409
friend that we had on a few months back

311
00:12:12,220 --> 00:12:16,450
who helped design the the low fuel

312
00:12:14,409 --> 00:12:19,328
warning for the Apollo capsule among

313
00:12:16,450 --> 00:12:20,860
other things but going into space it's a

314

00:12:19,328 --> 00:12:22,929
fairly risky business and when you're

315
00:12:20,860 --> 00:12:24,909
there I believe that one of the advice

316
00:12:22,929 --> 00:12:26,409
that you as we say have said in previous

317
00:12:24,909 --> 00:12:28,419
episodes not a real astronaut until

318
00:12:26,409 --> 00:12:30,189
you've used the space toilet if you're

319
00:12:28,419 --> 00:12:31,838
on the space station and of course I

320
00:12:30,190 --> 00:12:33,370
mentioned that they would not put brown

321
00:12:31,839 --> 00:12:35,410
eminem's and their em an impact because

322
00:12:33,370 --> 00:12:37,570
with what's going on in space you a

323
00:12:35,409 --> 00:12:40,149
weightless brown M&M may not be a brown

324
00:12:37,570 --> 00:12:41,740
M&M you'd want to be careful either I

325
00:12:40,149 --> 00:12:43,389
think they request the green ones my I

326
00:12:41,740 --> 00:12:46,180
would request we look at this here's a

327
00:12:43,389 --> 00:12:48,370
picture taken on the Apollo 11 mission

328
00:12:46,179 --> 00:12:51,278

it's Buzz Aldrin very it does look so

329

00:12:48,370 --> 00:12:54,429

much like a set gotta say it does but if

330

00:12:51,278 --> 00:12:56,679

you notice in his visor that is Neil

331

00:12:54,429 --> 00:12:58,239

Armstrong and I think if memory serves

332

00:12:56,679 --> 00:12:59,859

that's the only photograph of Neil

333

00:12:58,240 --> 00:13:01,930

Armstrong on the moon that one right

334

00:12:59,860 --> 00:13:04,629

there was he he got the camera he he he

335

00:13:01,929 --> 00:13:06,159

he got the hasselblad yeah great cameras

336

00:13:04,629 --> 00:13:07,629

absolutely and look at the quality of

337

00:13:06,159 --> 00:13:09,009

this photograph it's just it's just

338

00:13:07,629 --> 00:13:10,840

amazing it's

339

00:13:09,009 --> 00:13:13,450

amazing i do believe was to and quarter

340

00:13:10,840 --> 00:13:15,040

square negative and so part of the the

341

00:13:13,450 --> 00:13:17,230

moon landing hoax theories that the

342

00:13:15,039 --> 00:13:19,240

photos are so good and they are so well

343
00:13:17,230 --> 00:13:20,620
composed considering that Neil couldn't

344
00:13:19,240 --> 00:13:21,610
look through the viewfinder he had to

345
00:13:20,620 --> 00:13:23,169
shoot from the hip because it was

346
00:13:21,610 --> 00:13:27,580
attached to him he did a pretty good job

347
00:13:23,169 --> 00:13:29,949
but look no stars mmm whoa no stars and

348
00:13:27,580 --> 00:13:31,540
there are what is the reason that we get

349
00:13:29,950 --> 00:13:33,550
for that it's a reflection of the moon

350
00:13:31,539 --> 00:13:35,500
the sunlight on the moon and that black

351
00:13:33,549 --> 00:13:36,849
sea water reasoning from from memory

352
00:13:35,500 --> 00:13:39,429
partly because it's daylight it's

353
00:13:36,850 --> 00:13:41,050
daytime on the moon and the cameras

354
00:13:39,429 --> 00:13:44,079
weren't there to photograph stars they

355
00:13:41,049 --> 00:13:46,269
were calibrated for photographing the

356
00:13:44,080 --> 00:13:47,740
train and people yeah that's just a

357
00:13:46,269 --> 00:13:49,809
touch convenient but isn't it really

358
00:13:47,740 --> 00:13:55,620
really well next time I go to the moon

359
00:13:49,809 --> 00:13:55,619
me know I'll try it out for myself sorry

360
00:13:58,860 --> 00:14:03,009
don't you hate it when people make that

361
00:14:00,789 --> 00:14:05,159
noise next to you and the light's still

362
00:14:03,009 --> 00:14:05,159
red

363
00:14:08,110 --> 00:14:16,300
oh look it's it's a rare chance for the

364
00:14:14,679 --> 00:14:18,549
powerhouse to work a bit blue tonight

365
00:14:16,299 --> 00:14:21,809
isn't it it is indeed we are a family

366
00:14:18,549 --> 00:14:24,639
museum and I think this is an adults

367
00:14:21,809 --> 00:14:26,199
adults evening so it gives us a chance

368
00:14:24,639 --> 00:14:28,990
to bring out some of the things that we

369
00:14:26,200 --> 00:14:30,129
wouldn't necessarily talk about or we

370
00:14:28,990 --> 00:14:32,350
don't have to spend so much time

371

00:14:30,129 --> 00:14:33,939
explaining them and module name so

372
00:14:32,350 --> 00:14:36,339
Matthew Connell what's your position

373
00:14:33,940 --> 00:14:38,620
here I'm senior curator here at the

374
00:14:36,339 --> 00:14:40,839
Museum Wow so all this stuff would this

375
00:14:38,620 --> 00:14:42,490
be in the cupboard marked do not touch

376
00:14:40,839 --> 00:14:44,920
beware of the coyote normally would it

377
00:14:42,490 --> 00:14:47,110
well actually everything's in a cupboard

378
00:14:44,919 --> 00:14:48,429
mark do not do an itouch that's right

379
00:14:47,110 --> 00:14:50,528
and you've all got your gloves on well

380
00:14:48,429 --> 00:14:52,389
let's start with this here yeah well

381
00:14:50,528 --> 00:14:54,370
that's a pretty impressive display

382
00:14:52,389 --> 00:14:56,679
you've got here what's this one down

383
00:14:54,370 --> 00:14:59,259
here now this this clearly doesn't work

384
00:14:56,679 --> 00:15:01,088
this is a defective unit you've got here

385
00:14:59,259 --> 00:15:02,769

there's a small human that's going to

386

00:15:01,089 --> 00:15:04,180

come out from what looks like between

387

00:15:02,769 --> 00:15:05,350

two legs here and clearly this is not

388

00:15:04,179 --> 00:15:07,838

going to this is a broken one that

389

00:15:05,350 --> 00:15:10,810

someone returned this is a teaching it's

390

00:15:07,839 --> 00:15:13,500

a it's called a phantom and it's an

391

00:15:10,809 --> 00:15:16,809

obstetric phantom and it's it's to

392

00:15:13,500 --> 00:15:18,940

demonstrate how babies come from the

393

00:15:16,809 --> 00:15:22,989

uterus and out through the vaginal canal

394

00:15:18,940 --> 00:15:27,339

and I know it looks a bit rudimentary

395

00:15:22,990 --> 00:15:30,370

but but that's what it's for and on they

396

00:15:27,339 --> 00:15:34,120

still have similar things today although

397

00:15:30,370 --> 00:15:35,919

this one has a particular look to it it

398

00:15:34,120 --> 00:15:38,919

does it get shown to anyone before they

399

00:15:35,919 --> 00:15:40,539

decide to have a child at all because it

400
00:15:38,919 --> 00:15:42,250
could be an effective it could be an

401
00:15:40,539 --> 00:15:44,588
effective contraceptive device in some

402
00:15:42,250 --> 00:15:47,230
ways now it's you might want to show it

403
00:15:44,589 --> 00:15:50,079
to apps you know young teens that you

404
00:15:47,230 --> 00:15:53,589
think ought to consider the matter twice

405
00:15:50,078 --> 00:15:57,549
it doesn't make childbirth look inviting

406
00:15:53,589 --> 00:15:58,899
no but but it is instructional and I

407
00:15:57,549 --> 00:16:00,729
mean no offers the opportunity to I

408
00:15:58,899 --> 00:16:06,789
guess to demonstrate different types of

409
00:16:00,730 --> 00:16:08,649
births breech births and added alike so

410
00:16:06,789 --> 00:16:09,969
there what else have you got here that

411
00:16:08,649 --> 00:16:12,159
this pretty fascinating I've seen the

412
00:16:09,970 --> 00:16:13,329
whole look what's a Tom of Finland thing

413
00:16:12,159 --> 00:16:15,129
down the end thing we've got the

414
00:16:13,328 --> 00:16:17,139
Canadian Mountie for Tom of Finland with

415
00:16:15,129 --> 00:16:19,480
the rather impressive cardboard penis

416
00:16:17,139 --> 00:16:21,159
well I have to say I'm

417
00:16:19,480 --> 00:16:22,839
I don't know much about Tom of Finland

418
00:16:21,159 --> 00:16:26,528
I'd probably have to hand over to my

419
00:16:22,839 --> 00:16:28,870
colleague Glennis who who acquired Tom

420
00:16:26,528 --> 00:16:31,059
of Finland and she can perhaps offer

421
00:16:28,870 --> 00:16:33,310
some explanation yeah I just like to ask

422
00:16:31,059 --> 00:16:35,768
Glenn is where did you get a life-sized

423
00:16:33,309 --> 00:16:37,388
Canadian Mountie with the stiffy or not

424
00:16:35,769 --> 00:16:38,500
stiffy because I believe you can put the

425
00:16:37,389 --> 00:16:40,539
stiff your way for the more

426
00:16:38,500 --> 00:16:42,250
child-friendly shows in the mountain can

427
00:16:40,539 --> 00:16:45,698
just have his undies on that's right

428

00:16:42,250 --> 00:16:49,208
it's by i'm brandon heath care who is a

429
00:16:45,698 --> 00:16:52,659
performance artist who used masking and

430
00:16:49,208 --> 00:16:56,500
character costumes too i guess provoke

431
00:16:52,659 --> 00:16:58,569
at some again lesbian mardi gras and gay

432
00:16:56,500 --> 00:16:59,889
events believe i spoke to him once when

433
00:16:58,570 --> 00:17:01,690
he was marching in the mardi gras with

434
00:16:59,889 --> 00:17:03,070
the with or gingham outfit yeah that's

435
00:17:01,690 --> 00:17:05,259
right we've got gingham in the

436
00:17:03,070 --> 00:17:06,610
collection as well and I guess these

437
00:17:05,259 --> 00:17:09,129
things can't come out very often because

438
00:17:06,609 --> 00:17:11,918
it's a family-friendly museum yeah we

439
00:17:09,130 --> 00:17:15,640
can adapt as we can adapt Tom to take

440
00:17:11,919 --> 00:17:17,860
his penis off so yeah he's available for

441
00:17:15,640 --> 00:17:19,120
different situations and what is that

442
00:17:17,859 --> 00:17:22,029

you've got next to it looks like a

443

00:17:19,119 --> 00:17:24,099

Madonna type outfit I thought why I only

444

00:17:22,029 --> 00:17:27,609

described at the moment what is that and

445

00:17:24,099 --> 00:17:29,829

that's of course it by Madame lash yes

446

00:17:27,609 --> 00:17:34,869

sydney fetish royalty yep that's right

447

00:17:29,829 --> 00:17:36,460

an artist and you can see in the 70s and

448

00:17:34,869 --> 00:17:39,369

80s she had a shop called game booths

449

00:17:36,460 --> 00:17:41,319

and she designed and made fetish outfits

450

00:17:39,369 --> 00:17:44,319

they're hand-painted with scenes from

451

00:17:41,319 --> 00:17:48,730

fetish comics so on the course it is

452

00:17:44,319 --> 00:17:50,798

sweet gwendoline who was a comic by a

453

00:17:48,730 --> 00:17:55,000

guy called John Willie and he did change

454

00:17:50,798 --> 00:17:58,359

his name to Willie okay and Gwendolyn

455

00:17:55,000 --> 00:18:01,150

Sablan she's always tied up and you 69's

456

00:17:58,359 --> 00:18:03,129

the maid who which her so that's the

457
00:18:01,150 --> 00:18:04,720
scene I can see what this stuff doesn't

458
00:18:03,130 --> 00:18:05,860
normally come out now tonight because

459
00:18:04,720 --> 00:18:07,750
you've got members of the public here

460
00:18:05,859 --> 00:18:09,308
one of everything on your bench has

461
00:18:07,750 --> 00:18:10,929
received the most interest what have

462
00:18:09,308 --> 00:18:16,690
been people talking and asking you about

463
00:18:10,929 --> 00:18:18,309
the most um box of bumps back it up the

464
00:18:16,690 --> 00:18:19,960
box of bummed yeah but have a look at

465
00:18:18,308 --> 00:18:21,519
this cuz I saw something look like

466
00:18:19,960 --> 00:18:25,360
chicken Phil it's here and I wonder all

467
00:18:21,519 --> 00:18:27,970
right this isn't all right okay what are

468
00:18:25,359 --> 00:18:30,519
they silicon bums are those ceramic bums

469
00:18:27,970 --> 00:18:33,579
ceramic ceramic done by

470
00:18:30,519 --> 00:18:35,139
Australian ceramicist Susan hat are they

471
00:18:33,579 --> 00:18:37,539
modeled on someone a little bit small

472
00:18:35,140 --> 00:18:39,580
who do their men's thumbs and you'll

473
00:18:37,539 --> 00:18:42,549
notice that they're multicultural bums

474
00:18:39,579 --> 00:18:44,259
there are true yeah and she was part of

475
00:18:42,549 --> 00:18:47,079
this I feel like listening to some world

476
00:18:44,259 --> 00:18:51,039
music just by looking at them she's out

477
00:18:47,079 --> 00:18:53,169
of the funk movement kind of taking the

478
00:18:51,039 --> 00:18:54,909
seriousness out of art and ceramics and

479
00:18:53,170 --> 00:18:56,259
well being a playful for standing in

480
00:18:54,910 --> 00:18:57,400
front of box of bums I don't think I

481
00:18:56,259 --> 00:18:58,779
could be serious or very long at all

482
00:18:57,400 --> 00:19:01,600
this is great it's like something from

483
00:18:58,779 --> 00:19:02,950
are you being served you know when they

484
00:19:01,599 --> 00:19:04,449
had the undies that went on the robot

485

00:19:02,950 --> 00:19:05,799
things that went back and forth I'm sure

486
00:19:04,450 --> 00:19:08,470
I saw something like that on display

487
00:19:05,799 --> 00:19:09,849
that's great it's it hard to keep a

488
00:19:08,470 --> 00:19:11,410
straight face on a show like this are

489
00:19:09,849 --> 00:19:12,969
you trying to be serious too serious you

490
00:19:11,410 --> 00:19:14,890
know curator when you're doing this kind

491
00:19:12,970 --> 00:19:18,130
of thing you here we have the box of

492
00:19:14,890 --> 00:19:21,630
bands figure Perry results right we'll

493
00:19:18,130 --> 00:19:21,630
have a great night thank you

494
00:19:23,470 --> 00:19:25,529
you

495
00:19:40,160 --> 00:19:44,279
hey this is Jay novella from the

496
00:19:42,630 --> 00:19:46,200
skeptics guide to the universe podcast

497
00:19:44,279 --> 00:19:48,059
did you know that there are thousands of

498
00:19:46,200 --> 00:19:49,769
skeptical reports interviews and

499
00:19:48,059 --> 00:19:52,470

investigations going back to nineteen

500

00:19:49,769 --> 00:19:55,740

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501

00:19:52,470 --> 00:19:57,660

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502

00:19:55,740 --> 00:19:59,609

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503

00:19:57,660 --> 00:20:01,590

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504

00:19:59,609 --> 00:20:03,119

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505

00:20:01,589 --> 00:20:05,399

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506

00:20:03,119 --> 00:20:07,439

digital or hard copy of this the world's

507

00:20:05,400 --> 00:20:11,100

second oldest skeptical magazine that's

508

00:20:07,440 --> 00:20:24,690

ww skeptics com a you or just google

509

00:20:11,099 --> 00:20:26,819

Australian skeptics welcome to a week in

510

00:20:24,690 --> 00:20:29,220

science from are ions bringing you the

511

00:20:26,819 --> 00:20:31,049

science you need to know do you ever see

512

00:20:29,220 --> 00:20:33,720

your cat or dog staring at something

513

00:20:31,049 --> 00:20:35,940

invisible it's pretty creepy but it made

514
00:20:33,720 --> 00:20:38,930
me wonder if animals can actually see

515
00:20:35,940 --> 00:20:38,930
things that we can't

516
00:20:44,829 --> 00:20:49,490
first let's talk about how we see

517
00:20:47,390 --> 00:20:52,040
remember that the color of light is

518
00:20:49,490 --> 00:20:54,259
determined by its wavelength we have two

519
00:20:52,039 --> 00:20:57,019
types of receptor cells in our eyes to

520
00:20:54,259 --> 00:20:58,940
detect this light rod cells which detect

521
00:20:57,019 --> 00:21:00,950
how bright the light is and cone cells

522
00:20:58,940 --> 00:21:03,410
which detects the color of light by

523
00:21:00,950 --> 00:21:05,509
absorbing particular wavelengths human

524
00:21:03,410 --> 00:21:07,670
cone cells can detect red green and blue

525
00:21:05,509 --> 00:21:09,230
wavelengths and these can combine to

526
00:21:07,670 --> 00:21:12,019
give us any color in the visible

527
00:21:09,230 --> 00:21:14,990
spectrum but the visible spectrum only

528
00:21:12,019 --> 00:21:17,000
applies to humans very presumptuous many

529
00:21:14,990 --> 00:21:18,620
animals can see in wavelengths outside

530
00:21:17,000 --> 00:21:22,279
the visible spectrum we're actually

531
00:21:18,619 --> 00:21:24,229
missing out our red light receptors

532
00:21:22,279 --> 00:21:26,690
evolved after primates diverged from

533
00:21:24,230 --> 00:21:29,089
other mammals like cats and dogs meaning

534
00:21:26,690 --> 00:21:30,980
that they can't see Reds but recent

535
00:21:29,089 --> 00:21:33,439
research is revealing that many of these

536
00:21:30,980 --> 00:21:35,360
mammals can see UV light instead which

537
00:21:33,440 --> 00:21:38,150
is invisible to us and our primate

538
00:21:35,359 --> 00:21:40,069
relatives birds get even more again with

539
00:21:38,150 --> 00:21:43,220
an additional cone cell receptor that

540
00:21:40,069 --> 00:21:45,950
allows them to see violet plus lots and

541
00:21:43,220 --> 00:21:47,900
lots of birds seen uv2 kestrels and

542

00:21:45,950 --> 00:21:50,059
hawks for example can detect where

543
00:21:47,900 --> 00:21:52,220
rodents of being because their urine

544
00:21:50,059 --> 00:21:54,049
trails reflect UV light it's like a

545
00:21:52,220 --> 00:21:57,019
glowing map that shows their preys

546
00:21:54,049 --> 00:21:59,809
location from huge distances butterflies

547
00:21:57,019 --> 00:22:01,970
and bees also detect UV allowing them to

548
00:21:59,809 --> 00:22:04,220
see patterns on flowers that look plain

549
00:22:01,970 --> 00:22:05,809
yellow or white to us directing them

550
00:22:04,220 --> 00:22:08,450
straight to the juicy nectar or pollen

551
00:22:05,809 --> 00:22:10,079
and now for fast facts about animal

552
00:22:08,450 --> 00:22:12,899
vision

553
00:22:10,079 --> 00:22:14,908
while caps can't see red they do have

554
00:22:12,898 --> 00:22:16,739
more rod receptors than us meaning

555
00:22:14,909 --> 00:22:18,169
they're more sensitive to light and can

556
00:22:16,740 --> 00:22:21,298

see better than us when it's dark

557

00:22:18,169 --> 00:22:22,980

Viper's pythons and Boas have pits on

558

00:22:21,298 --> 00:22:25,349

their face containing membranes that

559

00:22:22,980 --> 00:22:27,089

detect long infrared wavelengths more

560

00:22:25,349 --> 00:22:29,269

commonly known as heat letting them

561

00:22:27,089 --> 00:22:32,339

detect warm bodies up to one meter away

562

00:22:29,269 --> 00:22:34,919

snow reflects UV light while whiteford

563

00:22:32,339 --> 00:22:36,778

doesn't so seeing in the UV is pretty

564

00:22:34,919 --> 00:22:38,250

helpful if you have a white polar bear

565

00:22:36,778 --> 00:22:40,919

stalking you which would be almost

566

00:22:38,250 --> 00:22:43,169

invisible to our eyes and while animals

567

00:22:40,919 --> 00:22:45,778

often see a more colorful world it can

568

00:22:43,169 --> 00:22:48,000

also be a bit fuzzy whereas humans see

569

00:22:45,778 --> 00:22:50,069

incredibly clearly that's it for this

570

00:22:48,000 --> 00:22:51,990

week in science for more information on

571
00:22:50,069 --> 00:22:55,349
how animals see the world go to the

572
00:22:51,990 --> 00:22:57,990
Orioles website I a u.s. stud org dot a

573
00:22:55,349 --> 00:23:00,569
you follow us on twitter at arias and

574
00:22:57,990 --> 00:23:03,470
like us on facebook i'm karen groom and

575
00:23:00,569 --> 00:23:03,470
we'll catch you next week

576
00:23:14,769 --> 00:23:31,179
on Maynard com Donna you hey you its

577
00:23:27,548 --> 00:23:31,179
table focus on

578
00:23:32,759 --> 00:23:36,480
made out here with

579
00:23:36,630 --> 00:23:42,920
hunger come back episode 6

580
00:23:43,170 --> 00:23:47,009
great news theme song we got there Tim

581
00:23:45,089 --> 00:23:49,589
great new theme song very happy with a

582
00:23:47,009 --> 00:23:51,539
new theme song bunga bunga Island is the

583
00:23:49,589 --> 00:23:54,959
place where we decide who stays who goes

584
00:23:51,539 --> 00:23:57,690
what's hot what's hotter what's yellow I

585
00:23:54,960 --> 00:23:59,759
mean just really what really is yellow

586
00:23:57,690 --> 00:24:02,820
empirically will answer all these

587
00:23:59,759 --> 00:24:10,490
questions and yours right here on bunga

588
00:24:02,819 --> 00:24:13,849
bunga here's may not spooky action at

589
00:24:10,490 --> 00:24:16,339
the distance

590
00:24:13,849 --> 00:24:17,719
but a lot of people wander through life

591
00:24:16,339 --> 00:24:20,119
and they want to know what's the point

592
00:24:17,720 --> 00:24:22,308
why am I doing this show really be here

593
00:24:20,119 --> 00:24:23,779
why should not just be under the blanket

594
00:24:22,308 --> 00:24:24,829
at home asleep well that's kind of what

595
00:24:23,779 --> 00:24:26,450
I'm going to be asking the bunch of

596
00:24:24,829 --> 00:24:28,879
people here at skeptics at the pub at

597
00:24:26,450 --> 00:24:30,860
Sydney skeptic to the pub we've got lots

598
00:24:28,880 --> 00:24:33,020
of people here tonight we've got Joe

599

00:24:30,859 --> 00:24:34,759
hello Joe hi hello may not I'm great how

600
00:24:33,019 --> 00:24:36,769
are you oh pretty good i've been asking

601
00:24:34,759 --> 00:24:38,509
people pretty much is what's the point

602
00:24:36,769 --> 00:24:40,279
of being a skeptic now why continue to

603
00:24:38,509 --> 00:24:44,298
be a skeptic why is there still a need

604
00:24:40,279 --> 00:24:45,798
to be one because frankly and with my

605
00:24:44,298 --> 00:24:47,210
greatest apologies to reach it here

606
00:24:45,798 --> 00:24:50,538
because you might have to put a beep in

607
00:24:47,210 --> 00:24:51,710
that's a lot of out there there is no

608
00:24:50,538 --> 00:24:53,480
you're making people making stuff up

609
00:24:51,710 --> 00:24:56,029
still you think people are still making

610
00:24:53,480 --> 00:24:58,610
stuff up Joe then they can stop up and

611
00:24:56,029 --> 00:25:00,440
they're believing it sometimes yes okay

612
00:24:58,609 --> 00:25:03,769
and what's the one you you fight

613
00:25:00,440 --> 00:25:05,929

personally you think the big way my big

614

00:25:03,769 --> 00:25:09,288

one does tend to be the anti-vaccination

615

00:25:05,929 --> 00:25:10,490

movement I'll say a bit I I tend to get

616

00:25:09,288 --> 00:25:13,009

pulled into anything health-related

617

00:25:10,490 --> 00:25:16,548

that's where I really get frustrated and

618

00:25:13,009 --> 00:25:19,250

a bit passionate yes Peter over here mr.

619

00:25:16,548 --> 00:25:21,019

ratbag now why should we continue to be

620

00:25:19,250 --> 00:25:23,569

skeptics when we could be doing

621

00:25:21,019 --> 00:25:26,359

something else involving a pool and

622

00:25:23,569 --> 00:25:28,009

drinks well I think I can still hit the

623

00:25:26,359 --> 00:25:30,558

pool and drinks in around the skepticism

624

00:25:28,009 --> 00:25:33,319

Isaac good good point sir the saddest

625

00:25:30,558 --> 00:25:35,389

book I've ever read in my life is dads

626

00:25:33,319 --> 00:25:37,519

and fallacies by martin gardner it was

627

00:25:35,390 --> 00:25:40,070

published in nineteen fifty two parts of

628
00:25:37,519 --> 00:25:41,839
catch-22 are pretty sad that why this is

629
00:25:40,069 --> 00:25:43,819
sad which published in nineteen fifty

630
00:25:41,839 --> 00:25:46,808
two and you read it that reads like

631
00:25:43,819 --> 00:25:49,069
today almost nothing in it as going away

632
00:25:46,808 --> 00:25:51,678
and so I don't think well they'll ever

633
00:25:49,069 --> 00:25:54,200
be a time when skepticism runs out of

634
00:25:51,679 --> 00:25:55,400
things to do I think they're back then

635
00:25:54,200 --> 00:25:56,929
you might have had a bit of more of the

636
00:25:55,400 --> 00:25:59,450
phrenology where the bumps on the head

637
00:25:56,929 --> 00:26:01,730
you might add more that then a lot of

638
00:25:59,450 --> 00:26:04,788
the stuff in that book is about religion

639
00:26:01,730 --> 00:26:06,470
about met health that medical things

640
00:26:04,788 --> 00:26:08,690
some of that stuff tear has been around

641
00:26:06,470 --> 00:26:11,630
forever I just never goes away is there

642
00:26:08,690 --> 00:26:12,769
any new sort of whew that's that's comin

643
00:26:11,630 --> 00:26:14,360
lately that you're gone well there's a

644
00:26:12,769 --> 00:26:17,389
new one or you reckon you've seen it all

645
00:26:14,359 --> 00:26:19,928
oh I think that there's the blue people

646
00:26:17,390 --> 00:26:21,278
are enormously imaginative and creative

647
00:26:19,929 --> 00:26:23,429
I've been something that didn't exist 20

648
00:26:21,278 --> 00:26:25,720
years ago is a cause wind farm syndrome

649
00:26:23,429 --> 00:26:29,798
where people can invent these new

650
00:26:25,720 --> 00:26:30,940
diseases that come along we've never

651
00:26:29,798 --> 00:26:33,548
heard of these things before but

652
00:26:30,940 --> 00:26:36,340
suddenly they're there and there's a

653
00:26:33,548 --> 00:26:37,658
mess of cures for them as well so I mean

654
00:26:36,339 --> 00:26:39,339
and of course they're also other things

655
00:26:37,659 --> 00:26:41,139
which as well as their hundreds of cures

656

00:26:39,339 --> 00:26:45,009
for things are also things which are

657
00:26:41,138 --> 00:26:48,579
cures for everything up I'll just wander

658
00:26:45,009 --> 00:26:50,378
around the table here oh how are you huh

659
00:26:48,579 --> 00:26:52,720
look why do you think we should still

660
00:26:50,378 --> 00:26:55,418
still be skeptics here like your group

661
00:26:52,720 --> 00:26:57,788
you're an engineer with a bit of physics

662
00:26:55,419 --> 00:27:00,340
action going on there and and you talk

663
00:26:57,788 --> 00:27:02,200
about the three-legged stool a lot why

664
00:27:00,339 --> 00:27:03,759
should we still be skeptics a favor I

665
00:27:02,200 --> 00:27:06,159
think the main reason is that we can

666
00:27:03,759 --> 00:27:09,490
have an enjoyable evening out among

667
00:27:06,159 --> 00:27:11,409
friends with no delusions see right fair

668
00:27:09,490 --> 00:27:13,569
enough everything has to be supported by

669
00:27:11,409 --> 00:27:17,080
evidence that's right had at least no

670
00:27:13,569 --> 00:27:18,668

delusions about the paranormal what is

671

00:27:17,079 --> 00:27:20,349

the thing that you've encountered lately

672

00:27:18,669 --> 00:27:22,299

that has been putting we've filled up

673

00:27:20,349 --> 00:27:24,759

okay well this one that we looked at

674

00:27:22,298 --> 00:27:26,980

which was the ability to back

675

00:27:24,759 --> 00:27:29,230

conversations using a very high

676

00:27:26,980 --> 00:27:31,480

resolution camera that can even pick up

677

00:27:29,230 --> 00:27:33,220

the vibrations on a piece of paper yes

678

00:27:31,480 --> 00:27:34,419

now yes this story came out a little

679

00:27:33,220 --> 00:27:36,730

while ago we're looking at a camera

680

00:27:34,419 --> 00:27:39,580

that's going a couple of hundreds of

681

00:27:36,730 --> 00:27:41,649

thousand frames a second isn't it oh yes

682

00:27:39,579 --> 00:27:42,999

or at least twenty thousand frames a

683

00:27:41,648 --> 00:27:45,398

second too if you want to capture all of

684

00:27:42,999 --> 00:27:47,048

the audio spectrum but but even 10,000

685
00:27:45,398 --> 00:27:49,058
frames a second to get you good quality

686
00:27:47,048 --> 00:27:51,519
sound and is this something that's

687
00:27:49,058 --> 00:27:53,829
actually doable well unlike most things

688
00:27:51,519 --> 00:27:55,720
are skeptics here's a bit yes it's been

689
00:27:53,829 --> 00:27:58,178
done by some University people and the

690
00:27:55,720 --> 00:28:01,419
physics is all sound and their tests

691
00:27:58,179 --> 00:28:03,940
look quite robust okay cool thanks for

692
00:28:01,419 --> 00:28:05,619
that okay you're welcome now you're over

693
00:28:03,940 --> 00:28:07,480
here in the corner getting stuck into

694
00:28:05,618 --> 00:28:09,278
your your pastor there and we do mean

695
00:28:07,480 --> 00:28:11,440
that we don't mean in a theological time

696
00:28:09,278 --> 00:28:15,308
you mean the kind you eat and why should

697
00:28:11,440 --> 00:28:18,490
we still be skeptics um I guess I on

698
00:28:15,308 --> 00:28:20,470
from katoomba and so my views are

699
00:28:18,490 --> 00:28:22,179
heavily influenced by where I live which

700
00:28:20,470 --> 00:28:23,350
means you get pretty cold at night so

701
00:28:22,179 --> 00:28:26,350
does that mean you're more skeptical

702
00:28:23,349 --> 00:28:29,108
during a day or what a man consumed by

703
00:28:26,349 --> 00:28:30,459
the 2780 postcode that we live in has

704
00:28:29,108 --> 00:28:32,500
one of the lowest vaccination

705
00:28:30,460 --> 00:28:34,930
it's in the country our vaccination

706
00:28:32,500 --> 00:28:36,549
rates are about 75 to 80 percent so how

707
00:28:34,930 --> 00:28:38,740
do they stack up against the north coast

708
00:28:36,549 --> 00:28:40,480
ones are also known to be low they're

709
00:28:38,740 --> 00:28:42,370
actually much better than the north

710
00:28:40,480 --> 00:28:43,509
coast we're actually started we in

711
00:28:42,369 --> 00:28:46,059
consumer actually much better than the

712
00:28:43,509 --> 00:28:48,670
north coast but compared to the rest of

713

00:28:46,059 --> 00:28:49,740
the country it's woeful and I believe we

714
00:28:48,670 --> 00:28:53,440
need about ninety-five percent

715
00:28:49,740 --> 00:28:55,750
vaccination rate for herd immunity so my

716
00:28:53,440 --> 00:28:57,340
community is at risk the children in my

717
00:28:55,750 --> 00:28:59,380
community and the elderly particularly

718
00:28:57,339 --> 00:29:01,119
or at risk so you get out there in the

719
00:28:59,380 --> 00:29:02,920
street and go hey if you had the jab or

720
00:29:01,119 --> 00:29:04,389
ever had your kids had the jab have you

721
00:29:02,920 --> 00:29:06,430
gone low believe you tried wrong with

722
00:29:04,390 --> 00:29:08,380
anybody look I haven't and what we need

723
00:29:06,430 --> 00:29:10,630
to do is to have it is to start a

724
00:29:08,380 --> 00:29:13,450
strategic campaign we need to include

725
00:29:10,630 --> 00:29:15,730
the GPS we need to have public forums we

726
00:29:13,450 --> 00:29:18,460
need to do a Facebook campaign but I

727
00:29:15,730 --> 00:29:20,950

have started I have started expressing

728

00:29:18,460 --> 00:29:23,680

my views on facebook and I didn't used

729

00:29:20,950 --> 00:29:25,120

to do that I used to to keep that to

730

00:29:23,680 --> 00:29:27,190

myself because there was so much

731

00:29:25,119 --> 00:29:29,469

opposition in my own community but I

732

00:29:27,190 --> 00:29:32,470

decided that children dying was probably

733

00:29:29,470 --> 00:29:35,890

more important than keeping friends cook

734

00:29:32,470 --> 00:29:39,009

pot in the womb thank you will try know

735

00:29:35,890 --> 00:29:40,750

who have we got here Claire Claire now

736

00:29:39,009 --> 00:29:42,549

why do you think we should be skeptics

737

00:29:40,750 --> 00:29:43,750

in 2014 what is the need for people to

738

00:29:42,549 --> 00:29:45,399

go around going could you show us

739

00:29:43,750 --> 00:29:46,630

evidence what is the need for that why

740

00:29:45,400 --> 00:29:48,400

do we need to bother people why do we

741

00:29:46,630 --> 00:29:49,780

need to annoy people like that because

742
00:29:48,400 --> 00:29:52,900
there's a lot of baloney that goes

743
00:29:49,779 --> 00:29:57,609
around alone yes salami now what's look

744
00:29:52,900 --> 00:29:59,860
at what to carry on that annoys you well

745
00:29:57,609 --> 00:30:01,779
I'm a teacher and my students always

746
00:29:59,859 --> 00:30:05,229
come up and go do you believe in the

747
00:30:01,779 --> 00:30:07,119
Bible or in evolution and we have a

748
00:30:05,230 --> 00:30:10,750
brilliant lesson absolutely brilliant

749
00:30:07,119 --> 00:30:14,309
lesson about how our brains are really

750
00:30:10,750 --> 00:30:16,630
fitted for storytelling and for you know

751
00:30:14,309 --> 00:30:18,639
investigating the world in a in a way

752
00:30:16,630 --> 00:30:21,190
that allowed our ancestors to survive

753
00:30:18,640 --> 00:30:23,110
but that's not a modern city environment

754
00:30:21,190 --> 00:30:27,039
we have to be aware of how our brains

755
00:30:23,109 --> 00:30:29,019
work and aware of how our mind can play

756
00:30:27,039 --> 00:30:30,279
tricks on us sometimes or can want to

757
00:30:29,019 --> 00:30:32,769
see something where there isn't

758
00:30:30,279 --> 00:30:35,139
something or can want to have a

759
00:30:32,769 --> 00:30:37,359
particular experience and in a modern

760
00:30:35,140 --> 00:30:40,930
city world we really have to be aware of

761
00:30:37,359 --> 00:30:41,699
how we function as human beings in their

762
00:30:40,930 --> 00:30:43,288
world

763
00:30:41,700 --> 00:30:45,058
working with primary school kids or high

764
00:30:43,288 --> 00:30:47,158
school kids high school kids kids who

765
00:30:45,058 --> 00:30:48,720
are troubled who have discipline

766
00:30:47,159 --> 00:30:52,049
problems behavior problems their kids

767
00:30:48,720 --> 00:30:55,860
who are on the real edge the the

768
00:30:52,048 --> 00:30:57,929
coalface so there's no BS because they

769
00:30:55,859 --> 00:31:01,740
are better at BS than you are so you

770

00:30:57,929 --> 00:31:03,899
have to does this make them more

771
00:31:01,740 --> 00:31:05,399
predisposed to believing whoo or less

772
00:31:03,898 --> 00:31:07,798
because they've got a bit more of a

773
00:31:05,398 --> 00:31:12,000
gritty by both sides of life sort of

774
00:31:07,798 --> 00:31:15,869
aspect both they're more exposed because

775
00:31:12,000 --> 00:31:17,819
they're they want anything and they

776
00:31:15,869 --> 00:31:20,849
don't have anything and so anything that

777
00:31:17,819 --> 00:31:22,918
sounds good they want to grab on to but

778
00:31:20,849 --> 00:31:25,230
also their their BS meter is highly

779
00:31:22,919 --> 00:31:27,870
attuned so they you just point out to

780
00:31:25,230 --> 00:31:29,159
them slightly one aspect of something

781
00:31:27,869 --> 00:31:31,709
that doesn't make sense and there and

782
00:31:29,159 --> 00:31:33,659
they understand it and what what's your

783
00:31:31,710 --> 00:31:35,159
favorite subject to teach to is a one

784
00:31:33,659 --> 00:31:36,419

aspect of science that you like getting

785

00:31:35,159 --> 00:31:38,130
over to the kids or was it more a

786

00:31:36,419 --> 00:31:39,929
philosophical critical thinking thing

787

00:31:38,130 --> 00:31:42,929
you're trying to push well my original

788

00:31:39,929 --> 00:31:44,309
training is in the fine arts I don't

789

00:31:42,929 --> 00:31:49,798
have science training I have science

790

00:31:44,308 --> 00:31:53,700
interest and I started out being at art

791

00:31:49,798 --> 00:31:55,918
teacher who then went out and did

792

00:31:53,700 --> 00:31:57,330
science talks and things about dinosaurs

793

00:31:55,919 --> 00:32:01,950
and so on and then I got this job at the

794

00:31:57,329 --> 00:32:03,269
school and my predilection for being

795

00:32:01,950 --> 00:32:07,169
very excited about something I'm

796

00:32:03,269 --> 00:32:11,190
interested in then you know makes it a

797

00:32:07,169 --> 00:32:12,960
good thing in my school because me I put

798

00:32:11,190 --> 00:32:15,509
over a sense of excitement and interest

799

00:32:12,960 --> 00:32:17,460
in whatever it is that I'm doing so the

800

00:32:15,509 --> 00:32:18,269
key to pick up on that well look well I

801

00:32:17,460 --> 00:32:21,389
think we're gonna talk to you again

802

00:32:18,269 --> 00:32:25,349
because you got lots of stories yeah

803

00:32:21,388 --> 00:32:27,000
okay thank you well I've just learned a

804

00:32:25,349 --> 00:32:29,219
lot of things I didn't know we've got

805

00:32:27,000 --> 00:32:31,288
someone here who has been at University

806

00:32:29,220 --> 00:32:33,089
for longer than the day I was there we

807

00:32:31,288 --> 00:32:36,148
have someone who has slippered frogs and

808

00:32:33,089 --> 00:32:37,829
has been tripping balls from frogs dr.

809

00:32:36,148 --> 00:32:39,329
jody royal ever got the name correct

810

00:32:37,829 --> 00:32:41,158
borrelli yeah I don't have that

811

00:32:39,329 --> 00:32:42,808
introduction before though that's a good

812

00:32:41,159 --> 00:32:43,919
one but those things are true you have

813
00:32:42,808 --> 00:32:45,148
like you've had well there's such a

814
00:32:43,919 --> 00:32:47,519
great frog I got to keep it here my

815
00:32:45,148 --> 00:32:49,109
sleeping bag I have I didn't want to

816
00:32:47,519 --> 00:32:50,099
lose it so I had to sort of keep it in

817
00:32:49,109 --> 00:32:51,388
the sleeping bag next to me in the

818
00:32:50,099 --> 00:32:52,949
plastic bag to make sure it didn't get

819
00:32:51,388 --> 00:32:54,429
away that's great as I which is much

820
00:32:52,950 --> 00:32:56,990
better than kissing a frog as you

821
00:32:54,430 --> 00:32:58,940
well I'm happy to do both frogs are

822
00:32:56,990 --> 00:33:00,559
amazing what you've done by proxy now

823
00:32:58,940 --> 00:33:02,090
it's a story about you eating lollies

824
00:33:00,559 --> 00:33:04,039
and tripping and having audio

825
00:33:02,089 --> 00:33:06,230
hallucinations cuz that's somewhere I

826
00:33:04,039 --> 00:33:08,450
want to go well that was back in the day

827

00:33:06,230 --> 00:33:11,059
and I definitely don't recommend it we

828
00:33:08,450 --> 00:33:13,009
were measuring a bunch of frogs and I

829
00:33:11,059 --> 00:33:15,109
was also eating Molly's at the same time

830
00:33:13,009 --> 00:33:17,240
and then it was audible that would not

831
00:33:15,109 --> 00:33:18,379
been a good thing to do but two or three

832
00:33:17,240 --> 00:33:19,940
o'clock in the morning you've got to

833
00:33:18,380 --> 00:33:23,030
have something to keep you awake until i

834
00:33:19,940 --> 00:33:24,440
was eating sugar and and then for about

835
00:33:23,029 --> 00:33:27,349
another 10 hours later I could hear

836
00:33:24,440 --> 00:33:29,330
frogs everywhere so i'm i'm not sure but

837
00:33:27,349 --> 00:33:32,209
like there was just frogs calling

838
00:33:29,329 --> 00:33:33,859
everywhere and one of my friends later

839
00:33:32,210 --> 00:33:35,360
told me that apparently auditory

840
00:33:33,859 --> 00:33:37,939
hallucinations are more common than

841
00:33:35,359 --> 00:33:40,009

visual like i don't know about this and

842

00:33:37,940 --> 00:33:41,930

yes because people are you know suppose

843

00:33:40,009 --> 00:33:43,670

lick toes and have all sorts of trip and

844

00:33:41,930 --> 00:33:45,049

the reason that you would have a weird

845

00:33:43,670 --> 00:33:46,490

reaction from licking a toad is not

846

00:33:45,049 --> 00:33:48,259

necessarily because of a hallucinogenic

847

00:33:46,490 --> 00:33:50,450

property but because of anything can

848

00:33:48,259 --> 00:33:51,650

live on them as it right I'd say it's

849

00:33:50,450 --> 00:33:53,450

much more likely to do with the things

850

00:33:51,650 --> 00:33:56,000

they're secreting from their skin so

851

00:33:53,450 --> 00:33:57,080

frogs are basically agar plates and and

852

00:33:56,000 --> 00:33:58,190

they're these sort of wet things that

853

00:33:57,079 --> 00:34:00,019

hop around the ground that should be

854

00:33:58,190 --> 00:34:02,750

infected by everything but they have all

855

00:34:00,019 --> 00:34:04,430

these amazing chemicals peptides things

856
00:34:02,750 --> 00:34:06,950
on their skin to stop them from getting

857
00:34:04,430 --> 00:34:08,659
infected so they have sunscreens they

858
00:34:06,950 --> 00:34:11,300
have antibacterials they have things are

859
00:34:08,659 --> 00:34:13,759
being looked in for HIV cancer research

860
00:34:11,300 --> 00:34:15,679
they're amazing um and so some of these

861
00:34:13,760 --> 00:34:18,530
things may also have potentially

862
00:34:15,679 --> 00:34:20,900
hallucinogenic effects Wow look and JD

863
00:34:18,530 --> 00:34:22,100
one thing I got I wonder what excited

864
00:34:20,900 --> 00:34:23,780
you about frogs you been to Vietnam

865
00:34:22,099 --> 00:34:25,429
you've been to Asia really interested in

866
00:34:23,780 --> 00:34:28,100
frog conservation and amphibian

867
00:34:25,429 --> 00:34:30,530
conservation why amphibians I mean the

868
00:34:28,099 --> 00:34:32,089
honey badgers pretty exciting the honey

869
00:34:30,530 --> 00:34:34,340
badger is maybe if I got into the honey

870
00:34:32,090 --> 00:34:36,260
badger before the frogs but I guess it

871
00:34:34,340 --> 00:34:38,780
was a combination of things eyeballs and

872
00:34:36,260 --> 00:34:41,450
toe pads like frogs amphibians they're

873
00:34:38,780 --> 00:34:43,610
just amazing first off and secondly

874
00:34:41,449 --> 00:34:45,829
they're in so much trouble so they're

875
00:34:43,610 --> 00:34:47,539
these amazing creatures that basically

876
00:34:45,829 --> 00:34:49,009
can't do anyone anyone harm they don't

877
00:34:47,539 --> 00:34:51,230
bite they don't do anything and they're

878
00:34:49,010 --> 00:34:53,030
literally you know becoming extinct in

879
00:34:51,230 --> 00:34:54,619
front of our eyes so one third of all

880
00:34:53,030 --> 00:34:58,790
and phibian certain of the extinction

881
00:34:54,619 --> 00:35:01,940
it's terrifying and so I decided I guess

882
00:34:58,789 --> 00:35:04,460
to dedicate my life my research to try

883
00:35:01,940 --> 00:35:05,869
and promote their conservation try and

884

00:35:04,460 --> 00:35:08,159
find as much information about them as

885
00:35:05,869 --> 00:35:09,960
possible discover the amazing new speed

886
00:35:08,159 --> 00:35:11,670
cease and just amazing species of

887
00:35:09,960 --> 00:35:13,440
amphibian out there tell other people

888
00:35:11,670 --> 00:35:15,450
how often they are and then try and work

889
00:35:13,440 --> 00:35:17,010
towards their conservation and skeptics

890
00:35:15,449 --> 00:35:19,048
earn listeners she's not mucking about

891
00:35:17,010 --> 00:35:21,510
how many species have you discovered

892
00:35:19,048 --> 00:35:23,309
personally so far I've described or

893
00:35:21,510 --> 00:35:25,430
discovered and described 14 new species

894
00:35:23,309 --> 00:35:28,410
of frog most of them from Vietnam

895
00:35:25,429 --> 00:35:30,389
amongst them the vampire flying frog hey

896
00:35:28,409 --> 00:35:32,399
and what did you do today listener hey I

897
00:35:30,389 --> 00:35:34,288
think I've had a vampire flying frog I'm

898
00:35:32,400 --> 00:35:36,809

thinking two things big teeth blood

899

00:35:34,289 --> 00:35:39,720

sucking and just going like all hell

900

00:35:36,809 --> 00:35:42,750

through the air ah turn that down a

901

00:35:39,719 --> 00:35:45,689

little bit a break for you well a brick

902

00:35:42,750 --> 00:35:47,670

red frog with big hands and webbing on

903

00:35:45,690 --> 00:35:49,588

the hands and feet that it uses to glide

904

00:35:47,670 --> 00:35:51,960

from the tree so it's adapted for life

905

00:35:49,588 --> 00:35:53,519

in the trees about five centimeters big

906

00:35:51,960 --> 00:35:55,798

sit comfortably on the palm of your hand

907

00:35:53,519 --> 00:35:58,199

totally friendly no problems there but

908

00:35:55,798 --> 00:36:00,809

the tadpoles which are found in really

909

00:35:58,199 --> 00:36:03,149

small holes in trees that are filled

910

00:36:00,809 --> 00:36:06,150

with water have curved black fangs

911

00:36:03,150 --> 00:36:08,880

sticking out of their mouths okay why

912

00:36:06,150 --> 00:36:10,950

you said you said you sent the photos of

913
00:36:08,880 --> 00:36:13,079
these tadpoles to a tadpole expert one

914
00:36:10,949 --> 00:36:16,108
of only two in the world and he replied

915
00:36:13,079 --> 00:36:17,519
to you in all caps now 76 year old guys

916
00:36:16,108 --> 00:36:19,199
can do that just by leaning on the wrong

917
00:36:17,519 --> 00:36:21,809
key sometimes but he was really excited

918
00:36:19,199 --> 00:36:23,429
that's great he was really excited and

919
00:36:21,809 --> 00:36:26,720
together we published a paper it was

920
00:36:23,429 --> 00:36:29,669
with a strangest tadpole in the world so

921
00:36:26,719 --> 00:36:31,288
the reason it's not for blood sucking

922
00:36:29,670 --> 00:36:32,818
which makes a much cooler story I've got

923
00:36:31,289 --> 00:36:34,890
to admit but it actually makes frogs way

924
00:36:32,818 --> 00:36:36,509
more friendly so there's no food in the

925
00:36:34,889 --> 00:36:38,400
tree holes that the tadpoles live in

926
00:36:36,510 --> 00:36:41,010
there's packed full of tadpoles nothing

927
00:36:38,400 --> 00:36:43,670
to eat the mother vampire flying frog

928
00:36:41,010 --> 00:36:45,960
comes back and feeds her babies

929
00:36:43,670 --> 00:36:47,309
unfertilized eggs and they're really

930
00:36:45,960 --> 00:36:49,019
hard to get hold off if you've got a

931
00:36:47,309 --> 00:36:51,960
silly little bit cloak mouth but most

932
00:36:49,019 --> 00:36:54,449
had poles have so the tadpoles have over

933
00:36:51,960 --> 00:36:56,760
time developed fangs to hook the egg and

934
00:36:54,449 --> 00:36:59,909
suck it down their big mouth and so that

935
00:36:56,760 --> 00:37:01,470
the mums feeding a babies let's talk

936
00:36:59,909 --> 00:37:03,298
evolution here this is where we get our

937
00:37:01,469 --> 00:37:05,098
chance to bag on Europe Europe

938
00:37:03,298 --> 00:37:06,420
apparently has crap frogs Southeast

939
00:37:05,099 --> 00:37:08,609
Asia's where it's at not too much

940
00:37:06,420 --> 00:37:10,108
Australia but Southeast Asia just wipes

941

00:37:08,608 --> 00:37:12,750
the floor with European frogs because

942
00:37:10,108 --> 00:37:14,818
they're rubbish I wouldn't go so far

943
00:37:12,750 --> 00:37:18,230
from you you you inferred that in your

944
00:37:14,818 --> 00:37:20,210
lecture you said European stuffs rubbish

945
00:37:18,230 --> 00:37:22,760
I think you're putting words into my

946
00:37:20,210 --> 00:37:24,769
mouth I did I did show you the frog from

947
00:37:22,760 --> 00:37:26,450
Europe that carries its eggs around on

948
00:37:24,769 --> 00:37:29,179
its back that is I thought ordinary I

949
00:37:26,449 --> 00:37:32,149
booed that frog midwife oh it's pretty

950
00:37:29,179 --> 00:37:33,529
cool it's okay but color-wise actually

951
00:37:32,150 --> 00:37:36,230
Central America is probably where the

952
00:37:33,530 --> 00:37:38,480
colors at I love Southeast Asian throats

953
00:37:36,230 --> 00:37:40,550
but Central America has these frogs that

954
00:37:38,480 --> 00:37:42,559
hop around during the day no poison dart

955
00:37:40,550 --> 00:37:44,660

frogs that are red and blue and Koreans

956

00:37:42,559 --> 00:37:46,460
stripy and it's insane to me even

957

00:37:44,659 --> 00:37:49,250
without humans why don't birds eat them

958

00:37:46,460 --> 00:37:50,570
because seed them well that's the point

959

00:37:49,250 --> 00:37:51,829
the only ones that hop around in the day

960

00:37:50,570 --> 00:37:53,150
and a brightly colored it because

961

00:37:51,829 --> 00:37:56,210
they're actually poisonous so they you

962

00:37:53,150 --> 00:37:57,680
don't care the frogs are advertising

963

00:37:56,210 --> 00:37:59,809
that they poisonous by their bright

964

00:37:57,679 --> 00:38:02,389
colors so they're like strutting around

965

00:37:59,809 --> 00:38:04,099
proud gun check me out definitely but

966

00:38:02,389 --> 00:38:06,079
there are some frogs that see that and

967

00:38:04,099 --> 00:38:07,400
then evolution happens and and they

968

00:38:06,079 --> 00:38:08,779
actually start to look like and

969

00:38:07,400 --> 00:38:10,849
salamanders as well they look like

970
00:38:08,780 --> 00:38:12,680
they're poisonous counterparts and the

971
00:38:10,849 --> 00:38:14,118
Predators think oh look at you you're

972
00:38:12,679 --> 00:38:15,980
you know brightly colored as well I

973
00:38:14,119 --> 00:38:17,930
won't eat you but actually they're just

974
00:38:15,980 --> 00:38:19,608
mimicking the poisonous one and getting

975
00:38:17,929 --> 00:38:21,469
away with it without having to invest in

976
00:38:19,608 --> 00:38:23,900
all those chemicals in their skin that's

977
00:38:21,469 --> 00:38:26,059
so cool and so why are European frogs

978
00:38:23,900 --> 00:38:28,309
not as very doors as colorful just

979
00:38:26,059 --> 00:38:31,549
because the landscape often temperate

980
00:38:28,309 --> 00:38:32,719
areas so the the cooler flatter areas in

981
00:38:31,550 --> 00:38:36,170
particular don't have as much diversity

982
00:38:32,719 --> 00:38:38,389
the tropics is where in 15 diversity is

983
00:38:36,170 --> 00:38:40,730
is generally at and especially really

984
00:38:38,389 --> 00:38:42,349
topographically diverse areas so really

985
00:38:40,730 --> 00:38:44,300
mountainous areas like the areas in

986
00:38:42,349 --> 00:38:45,949
Vietnam that i work at you get the

987
00:38:44,300 --> 00:38:47,330
amphibians that are just adapted to the

988
00:38:45,949 --> 00:38:49,039
cool wet climates on the top of one

989
00:38:47,329 --> 00:38:51,289
mountain peak so they're essentially on

990
00:38:49,039 --> 00:38:52,820
Islands surrounded by habitat that they

991
00:38:51,289 --> 00:38:54,259
can't live in and these are the ones

992
00:38:52,820 --> 00:38:56,510
that also likely to be affected by

993
00:38:54,260 --> 00:38:58,730
climate change in a big way and did

994
00:38:56,510 --> 00:39:00,260
Australia not get a greater range of

995
00:38:58,730 --> 00:39:01,820
frogs because the land bridge was cut

996
00:39:00,260 --> 00:39:03,500
before the frogs come across is that the

997
00:39:01,820 --> 00:39:05,119
reason why we have got the range that's

998

00:39:03,500 --> 00:39:07,369
that's a lot to do with it yet so

999
00:39:05,119 --> 00:39:08,809
salamanders originated in diversified in

1000
00:39:07,369 --> 00:39:11,420
the north and we didn't we didn't get

1001
00:39:08,809 --> 00:39:13,789
them down we did get one true frog one

1002
00:39:11,420 --> 00:39:15,260
European kind of frog or on it that came

1003
00:39:13,789 --> 00:39:17,389
down to a land bridge from Papua New

1004
00:39:15,260 --> 00:39:19,520
Guinea so we have one true frog in

1005
00:39:17,389 --> 00:39:21,650
Australia but the other frogs we got

1006
00:39:19,519 --> 00:39:24,739
here a long time ago and they adapted to

1007
00:39:21,650 --> 00:39:26,480
amazing diversity like see nowhere else

1008
00:39:24,739 --> 00:39:28,399
like tree frogs in Australia the high

1009
00:39:26,480 --> 00:39:30,230
lids normally they're tree frogs in

1010
00:39:28,400 --> 00:39:31,160
Australia their tree frogs their frogs

1011
00:39:30,230 --> 00:39:33,230
are very underground

1012
00:39:31,159 --> 00:39:35,089

for years they just their ground frogs

1013

00:39:33,230 --> 00:39:37,190

they've just adapted to everything look

1014

00:39:35,090 --> 00:39:39,470

I bet let's give a shout out to the

1015

00:39:37,190 --> 00:39:41,269

frogs of ash island near Newcastle we've

1016

00:39:39,469 --> 00:39:42,559

got the golden frog of a Shaolin do you

1017

00:39:41,269 --> 00:39:44,780

know that one at all the green and

1018

00:39:42,559 --> 00:39:46,639

golden bell frogs yeah that'd be it i do

1019

00:39:44,780 --> 00:39:48,620

that's a rather famous frog in australia

1020

00:39:46,639 --> 00:39:50,539

especially sydney ya know is it very

1021

00:39:48,619 --> 00:39:52,279

endangered that one it is endangered

1022

00:39:50,539 --> 00:39:55,250

it's a funny frog because it actually

1023

00:39:52,280 --> 00:39:57,950

should be a weed it really likes like

1024

00:39:55,250 --> 00:39:59,599

newly established paste places polluted

1025

00:39:57,949 --> 00:40:01,699

sort of ponds that are really ephemeral

1026

00:39:59,599 --> 00:40:03,230

oily temporary and it can move like one

1027
00:40:01,699 --> 00:40:04,399
or two kilometres in a night so by all

1028
00:40:03,230 --> 00:40:06,530
accounts you think this prob would be

1029
00:40:04,400 --> 00:40:08,030
everywhere but unfortunately it's not

1030
00:40:06,530 --> 00:40:09,470
it's declined from at least in a ninety

1031
00:40:08,030 --> 00:40:11,630
percent of the places that used to occur

1032
00:40:09,469 --> 00:40:13,519
and the famous place it was was homebush

1033
00:40:11,630 --> 00:40:15,320
and it loves loves the brick pit it

1034
00:40:13,519 --> 00:40:17,389
loves these really weird places that no

1035
00:40:15,320 --> 00:40:20,059
other frogs would but a problem is a lot

1036
00:40:17,389 --> 00:40:21,980
of the frog places that we now build a

1037
00:40:20,059 --> 00:40:23,480
lot of the permanent permanent water

1038
00:40:21,980 --> 00:40:25,460
bodies they don't like permanent water

1039
00:40:23,480 --> 00:40:27,079
bodies so actually when people build

1040
00:40:25,460 --> 00:40:28,880
frog pond in their backyard they're

1041
00:40:27,079 --> 00:40:31,819
building habitats for only certain kinds

1042
00:40:28,880 --> 00:40:33,650
of frogs like the stripe marsh frog or

1043
00:40:31,820 --> 00:40:35,269
things like that so we're actually not

1044
00:40:33,650 --> 00:40:36,829
creating habitat for all of the frogs

1045
00:40:35,269 --> 00:40:37,789
that do live in the area this is

1046
00:40:36,829 --> 00:40:39,409
something you mentioned in your very

1047
00:40:37,789 --> 00:40:41,509
interesting talk you said that we seem

1048
00:40:39,409 --> 00:40:43,849
to love certain and we want to protect

1049
00:40:41,510 --> 00:40:45,170
certain kinds of charismatic frog now

1050
00:40:43,849 --> 00:40:46,789
what would that be would that be ones

1051
00:40:45,170 --> 00:40:48,860
that are only colorful or make a great

1052
00:40:46,789 --> 00:40:51,409
noise is that why we as humans we only

1053
00:40:48,860 --> 00:40:53,390
like that kind of frog yeah I think I

1054
00:40:51,409 --> 00:40:55,069
think unusual unlike the gastric

1055

00:40:53,389 --> 00:40:57,889
brooding frog and the babies and it's

1056
00:40:55,070 --> 00:40:59,900
stomach that's pretty amazing um yeah

1057
00:40:57,889 --> 00:41:01,549
the beautiful things tend to get the the

1058
00:40:59,900 --> 00:41:03,170
rewards a little brown frogs a lot of

1059
00:41:01,550 --> 00:41:04,730
the things that I study a leaflet of

1060
00:41:03,170 --> 00:41:06,110
frogs and there you know about two

1061
00:41:04,730 --> 00:41:07,039
centimeters big they're brown they're

1062
00:41:06,110 --> 00:41:09,410
kind of all looked the same and they

1063
00:41:07,039 --> 00:41:10,940
sound like insects most probably we're

1064
00:41:09,409 --> 00:41:12,769
not going to put a lot of money into the

1065
00:41:10,940 --> 00:41:15,950
conservation of those frogs as much as I

1066
00:41:12,769 --> 00:41:18,519
might love them but for amazing flying

1067
00:41:15,949 --> 00:41:21,409
frogs beautiful tree frogs salamanders

1068
00:41:18,519 --> 00:41:23,389
hopefully you know we would put the

1069
00:41:21,409 --> 00:41:24,980

effort in for them at least although

1070

00:41:23,389 --> 00:41:26,629

often they're also under threat from the

1071

00:41:24,980 --> 00:41:28,460

pet trade because they are so beautiful

1072

00:41:26,630 --> 00:41:29,720

I'm a huge fan of the axolotl the

1073

00:41:28,460 --> 00:41:31,280

Mexican walking fish does it actually

1074

00:41:29,719 --> 00:41:33,529

count or because it's sort of in between

1075

00:41:31,280 --> 00:41:35,510

it's not a really I'm phibian it is an

1076

00:41:33,530 --> 00:41:37,550

amphibian it's a salamander but it's

1077

00:41:35,510 --> 00:41:40,250

actually a Peter morphix salamander

1078

00:41:37,550 --> 00:41:42,350

which means it stays in its larval stage

1079

00:41:40,250 --> 00:41:44,309

and still breeds like it's a weird thing

1080

00:41:42,349 --> 00:41:45,239

it's basically a tadpole that breeds

1081

00:41:44,309 --> 00:41:47,159

but you know what's interesting about

1082

00:41:45,239 --> 00:41:49,199

that as common is it isn't a pet trade

1083

00:41:47,159 --> 00:41:51,659

it's actually almost extinct in its

1084
00:41:49,199 --> 00:41:52,919
native habitat in Mexico because people

1085
00:41:51,659 --> 00:41:54,809
have lifted it from there or the

1086
00:41:52,920 --> 00:41:56,460
habitats been stuffed up it's basically

1087
00:41:54,809 --> 00:41:59,250
in Mexico City so the habitat is is

1088
00:41:56,460 --> 00:42:00,599
pretty much pretty much gone and so what

1089
00:41:59,250 --> 00:42:02,909
we have is this weird kind of captive

1090
00:42:00,599 --> 00:42:04,409
animal that's you know but it's bred to

1091
00:42:02,909 --> 00:42:06,149
be in captivity but the actual native

1092
00:42:04,409 --> 00:42:08,639
animal is in a heck of a lot of trouble

1093
00:42:06,150 --> 00:42:10,710
yeah um you've actually eaten frog too

1094
00:42:08,639 --> 00:42:12,389
because you you get pretty hungry and

1095
00:42:10,710 --> 00:42:13,500
what's it taste like and I guess you

1096
00:42:12,389 --> 00:42:15,719
wouldn't recommend we all do this

1097
00:42:13,500 --> 00:42:17,869
because a cane toad you don't eat them

1098
00:42:15,719 --> 00:42:21,839
you're really picking parts of the talk

1099
00:42:17,869 --> 00:42:25,049
yes I I have a full the confirmation

1100
00:42:21,840 --> 00:42:26,579
bias I think yes i have i was a

1101
00:42:25,050 --> 00:42:28,380
vegetarian when i first moved to asia

1102
00:42:26,579 --> 00:42:30,509
and that didn't last too long out of

1103
00:42:28,380 --> 00:42:32,360
almost have asian in the forest i have

1104
00:42:30,510 --> 00:42:34,350
eaten frog it tastes like chicken

1105
00:42:32,360 --> 00:42:35,579
probably I mean that's what everyone

1106
00:42:34,349 --> 00:42:37,440
says everything pretty much taste like

1107
00:42:35,579 --> 00:42:39,000
that's not the normal kind of animal

1108
00:42:37,440 --> 00:42:41,340
that we eat but it's a really important

1109
00:42:39,000 --> 00:42:42,510
source of protein for a lot of southeast

1110
00:42:41,340 --> 00:42:44,280
asian a lot of countries around the

1111
00:42:42,510 --> 00:42:45,990
world and in a lot of places it's quite

1112

00:42:44,280 --> 00:42:47,850
sustainable because frogs can braid into

1113
00:42:45,989 --> 00:42:50,189
large numbers so rice paddy frogs and

1114
00:42:47,849 --> 00:42:52,319
things but it becomes too wet where

1115
00:42:50,190 --> 00:42:53,519
they're being harvested from patches of

1116
00:42:52,320 --> 00:42:55,140
forests and things that we start

1117
00:42:53,519 --> 00:42:56,369
worrying about whether the frogs are

1118
00:42:55,139 --> 00:42:58,379
only a small area are really being

1119
00:42:56,369 --> 00:42:59,730
affected because you were talking about

1120
00:42:58,380 --> 00:43:01,619
conservation if we were interested in

1121
00:42:59,730 --> 00:43:02,820
conservation of amphibians in Australia

1122
00:43:01,619 --> 00:43:04,019
and elsewhere in the world where should

1123
00:43:02,820 --> 00:43:06,990
we go to have a look and learn about

1124
00:43:04,019 --> 00:43:08,579
this and maybe get up some cash well of

1125
00:43:06,989 --> 00:43:11,299
course I'm biased so I would say the

1126
00:43:08,579 --> 00:43:13,469

Australian Museum Research Institute oh

1127

00:43:11,300 --> 00:43:15,630

yeah my mother was the what's a web

1128

00:43:13,469 --> 00:43:17,039

address for that oh I've had a personal

1129

00:43:15,630 --> 00:43:18,750

website dress but you can just Google

1130

00:43:17,039 --> 00:43:22,289

and Phoebe ins and the Australian Museum

1131

00:43:18,750 --> 00:43:23,909

or you can google me Jody Rowley and

1132

00:43:22,289 --> 00:43:25,619

you'll find my website and you can see

1133

00:43:23,909 --> 00:43:29,099

lots of cool photos of frogs and where

1134

00:43:25,619 --> 00:43:31,199

are you off to next Vietnam of course ok

1135

00:43:29,099 --> 00:43:32,940

you said that look I had no sorry this

1136

00:43:31,199 --> 00:43:35,129

is things in your talk I really picked

1137

00:43:32,940 --> 00:43:36,990

up on canopy frogs now these are frogs

1138

00:43:35,130 --> 00:43:38,640

that live what 40 feet in the air for

1139

00:43:36,989 --> 00:43:40,109

all of their life how're we ever going

1140

00:43:38,639 --> 00:43:42,629

to find them because you won't go up

1141
00:43:40,110 --> 00:43:44,610
there and I don't blame you usually oh

1142
00:43:42,630 --> 00:43:45,869
well actually this is not entirely true

1143
00:43:44,610 --> 00:43:47,430
i'm not sure but i was gonna say that

1144
00:43:45,869 --> 00:43:48,960
most frogs would have to come to the

1145
00:43:47,429 --> 00:43:51,960
ground at some stage but then not be

1146
00:43:48,960 --> 00:43:53,789
true um we wouldn't know the thing is if

1147
00:43:51,960 --> 00:43:55,050
they're calling we might get really

1148
00:43:53,789 --> 00:43:56,750
creative and we might get up there and

1149
00:43:55,050 --> 00:43:58,880
actually i've had local guys work

1150
00:43:56,750 --> 00:44:00,980
with me in the area that have gone

1151
00:43:58,880 --> 00:44:03,019
climbing up trees looking for things I'm

1152
00:44:00,980 --> 00:44:04,099
a wuss when it comes to Heights I'm not

1153
00:44:03,019 --> 00:44:06,769
the person that you would traditionally

1154
00:44:04,099 --> 00:44:08,989
think of climbing mountains in Vietnam I

1155
00:44:06,769 --> 00:44:10,969
have some really amazing students and

1156
00:44:08,989 --> 00:44:12,529
colleagues that will tell me which way

1157
00:44:10,969 --> 00:44:16,189
to walk when we're scaling waterfalls

1158
00:44:12,530 --> 00:44:17,660
and I start freaking out your only child

1159
00:44:16,190 --> 00:44:18,920
and your mum would be a bit upset if she

1160
00:44:17,659 --> 00:44:21,980
knew what you were doing in those

1161
00:44:18,920 --> 00:44:23,659
rainforest tie up but she never said not

1162
00:44:21,980 --> 00:44:25,400
to go and that's why i named a frog

1163
00:44:23,659 --> 00:44:28,009
after her she did not want her only

1164
00:44:25,400 --> 00:44:29,990
child moving to Cambodia and working for

1165
00:44:28,010 --> 00:44:33,650
months in remote areas with you know

1166
00:44:29,989 --> 00:44:35,929
like 14 guys in the forest but um she

1167
00:44:33,650 --> 00:44:38,030
supported me I didn't found frogs and it

1168
00:44:35,929 --> 00:44:40,129
helped out water I've got my daughter

1169

00:44:38,030 --> 00:44:42,019
named a fraud after me what's your son

1170
00:44:40,130 --> 00:44:43,610
done he's a lawyer yeah some people

1171
00:44:42,019 --> 00:44:45,619
might take offense at having a frog

1172
00:44:43,610 --> 00:44:47,120
named often but not my mum she's got the

1173
00:44:45,619 --> 00:44:48,769
Helens flying frog in the back of a

1174
00:44:47,119 --> 00:44:51,409
phone we were in the local paper when it

1175
00:44:48,769 --> 00:44:54,530
was described that's the pinnacle of mum

1176
00:44:51,409 --> 00:44:56,029
hood right so look get a look at the

1177
00:44:54,530 --> 00:44:57,769
museum and look because you do have some

1178
00:44:56,030 --> 00:44:59,810
wonderful photos of frogs and what is

1179
00:44:57,769 --> 00:45:01,670
the best looking frog I know it's a

1180
00:44:59,809 --> 00:45:05,929
tough question you have to say your mum

1181
00:45:01,670 --> 00:45:07,610
strong but you know I'd say some of the

1182
00:45:05,929 --> 00:45:09,619
tiny little green frogs which don't have

1183
00:45:07,610 --> 00:45:13,210

common names there in the genus Chris

1184

00:45:09,619 --> 00:45:16,279

cyclists from Southeast Asia which have

1185

00:45:13,210 --> 00:45:18,260

transparent skin turquoise bone and one

1186

00:45:16,280 --> 00:45:19,490

ream blood they're amazing and the

1187

00:45:18,260 --> 00:45:21,740

Bloods green because they have more cop

1188

00:45:19,489 --> 00:45:25,129

in the Nile haha it's called delivered

1189

00:45:21,739 --> 00:45:27,379

and it's a bile pigment I think I'm not

1190

00:45:25,130 --> 00:45:28,789

entirely sure why that some animals have

1191

00:45:27,380 --> 00:45:30,410

this there are a few lizards and things

1192

00:45:28,789 --> 00:45:32,360

like that but it's it's pretty bizarre

1193

00:45:30,409 --> 00:45:34,279

to have green blood thank you for a

1194

00:45:32,360 --> 00:45:36,500

fascinating talk tonight and never let

1195

00:45:34,280 --> 00:45:39,170

anyone I know you tell you listener the

1196

00:45:36,500 --> 00:45:42,400

frogs are amphibians are dull never

1197

00:45:39,170 --> 00:45:42,400

thank you very much

1198
00:46:00,320 --> 00:46:04,740
astronomy cast who takes a fact space

1199
00:46:02,670 --> 00:46:06,450
journey through the cosmos as it offers

1200
00:46:04,739 --> 00:46:09,119
listeners weekly discussions on

1201
00:46:06,449 --> 00:46:12,059
astronomical topics ranging from planets

1202
00:46:09,119 --> 00:46:14,339
to cosmology hosted by Fraser Cain of

1203
00:46:12,059 --> 00:46:15,360
Universe Today and myself dr. Pamela

1204
00:46:14,340 --> 00:46:18,030
gave southern illinois university

1205
00:46:15,360 --> 00:46:19,890
edwardsville this show brings the

1206
00:46:18,030 --> 00:46:22,320
questions of an avid astronomy lover

1207
00:46:19,889 --> 00:46:24,420
directly to an astronomer together

1208
00:46:22,320 --> 00:46:25,950
Fraser and I explore what is known and

1209
00:46:24,420 --> 00:46:28,710
being discovered about the universe

1210
00:46:25,949 --> 00:46:30,809
around us join us each week as we take a

1211
00:46:28,710 --> 00:46:34,340
fax space journey through the cosmos at

1212
00:46:30,809 --> 00:46:34,340
astronomy cast calm

1213
00:46:46,460 --> 00:46:50,550
well thank you for listening to the

1214
00:46:48,449 --> 00:46:52,049
skeptical zone that was a mixed bag of an

1215
00:46:50,550 --> 00:46:53,340
episode main on that's what we like we

1216
00:46:52,050 --> 00:46:55,650
like a variety it's like the variety

1217
00:46:53,340 --> 00:46:57,840
show it's like a more common wise comedy

1218
00:46:55,650 --> 00:46:59,880
show with science it's exactly like that

1219
00:46:57,840 --> 00:47:01,559
and for those of you under 30 google

1220
00:46:59,880 --> 00:47:03,390
more common wise and if you're really

1221
00:47:01,559 --> 00:47:05,489
special try little and large they were

1222
00:47:03,389 --> 00:47:07,618
another comic duo I remember them oh

1223
00:47:05,489 --> 00:47:10,709
yeah I remember those Joe thanks for

1224
00:47:07,619 --> 00:47:13,440
being here too well watch Maynard and I

1225
00:47:10,710 --> 00:47:14,639
make complete geese or geese of

1226

00:47:13,440 --> 00:47:15,750
ourselves during the mystery

1227
00:47:14,639 --> 00:47:18,150
investigators show you think of the

1228
00:47:15,750 --> 00:47:21,030
mystery investigators show very goose

1229
00:47:18,150 --> 00:47:22,349
like I recommend it very goose like me

1230
00:47:21,030 --> 00:47:24,660
now that's the highest compliment we've

1231
00:47:22,349 --> 00:47:26,250
had I think in this white lab coat I do

1232
00:47:24,659 --> 00:47:28,519
look like a lot like someone from the

1233
00:47:26,250 --> 00:47:30,719
ponds Institute and I quite like that

1234
00:47:28,519 --> 00:47:33,000
well thank you very much again for being

1235
00:47:30,719 --> 00:47:34,500
here it's a great time with her to the

1236
00:47:33,000 --> 00:47:36,059
powerhouse museum thank you to the

1237
00:47:34,500 --> 00:47:38,280
powerhouse museum for having the mystery

1238
00:47:36,059 --> 00:47:39,989
investigators we've reached a lot of

1239
00:47:38,280 --> 00:47:41,280
people a lot of audience a lot of kids

1240
00:47:39,989 --> 00:47:42,899

lot of adults we've had a really great

1241

00:47:41,280 --> 00:47:44,369

time water divining all the rest of it

1242

00:47:42,900 --> 00:47:45,780

and I want to thank the powers museum I

1243

00:47:44,369 --> 00:47:48,420

broke a few things while I was here but

1244

00:47:45,780 --> 00:47:51,060

they were very nice to me that's good to

1245

00:47:48,420 --> 00:47:53,039

hear and until next week this is Maynard

1246

00:47:51,059 --> 00:48:00,420

Joe and Richard signing off from Sydney

1247

00:47:53,039 --> 00:48:03,719

Australia who Roble you've been

1248

00:48:00,420 --> 00:48:08,250

listening to the skeptic zone visit our

1249

00:48:03,719 --> 00:48:10,709

website at www.skepticzoneTV.com for

1250

00:48:08,250 --> 00:48:12,429

comments contacts and extra video

1251

00:48:10,710 --> 00:48:14,460

reports

1252

00:48:12,429 --> 00:48:14,460

Oh