

Episode 536

THE
**SKEPTIC
ZONE**
PODCAST

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The Skeptic Zone Podcast

Dr Brad McKay



Episode 536 - 27 Jan 2019

Ben Radford talks Yowies

Pill Testing?

Trish Hann interviews
Dr Brad McKay

We visit the
California Academy of Sciences

1
00:00:11,900 --> 00:00:09,120
welcome to the skeptic zone the podcast

2
00:00:25,400 --> 00:00:11,910
from Australia for science and reason

3
00:00:33,619 --> 00:00:28,220
yes it's the skeptic zone podcast

4
00:00:37,130 --> 00:00:33,629
episode number 536 for the 27th of

5
00:00:40,280 --> 00:00:37,140
January 2019 richardsaunders coming to

6
00:00:45,520 --> 00:00:40,290
you today from Golden Gate Park in San

7
00:00:49,880 --> 00:00:45,530
Francisco I'm on my way to visit the

8
00:00:53,780 --> 00:00:49,890
wonderful Academy of Sciences Building

9
00:00:54,770 --> 00:00:53,790
Museum exhibition it's been here for

10
00:00:58,579 --> 00:00:54,780
some years now

11
00:01:00,670 --> 00:00:58,589
and it has a staggering array of things

12
00:01:04,670 --> 00:01:00,680
to do things to look at things to

13
00:01:06,590 --> 00:01:04,680

experience and a gift shop a report

14

00:01:09,740 --> 00:01:06,600

about that coming up later on in the

15

00:01:14,210 --> 00:01:09,750

skeptic zone also this week yow ease

16

00:01:17,120 --> 00:01:14,220

oh yes Yowies a report of a Yowie

17

00:01:19,069 --> 00:01:17,130

attacking a truck from Australia in the

18

00:01:21,350 --> 00:01:19,079

state of Queensland and you'll be

19

00:01:23,600 --> 00:01:21,360

reading that report and talking about

20

00:01:27,100 --> 00:01:23,610

these mythical creatures

21

00:01:30,050 --> 00:01:27,110

well maybe their mythical with noted

22

00:01:32,649 --> 00:01:30,060

cryptozoologist Ben Radford and of

23

00:01:36,440 --> 00:01:32,659

course he is one of the co-hosts of the

24

00:01:38,450 --> 00:01:36,450

squaring the strange podcast also

25

00:01:41,779 --> 00:01:38,460

another report from Trish Hann in her

26
00:01:46,039 --> 00:01:41,789
new segment Trish and chips this week

27
00:01:49,399 --> 00:01:46,049
Trish chats to dr. Brad Makai about pill

28
00:01:53,510 --> 00:01:49,409
testing at concerts music events and

29
00:01:56,090 --> 00:01:53,520
this is a big big topic in Australia

30
00:01:58,249 --> 00:01:56,100
because sadly young people seem to be

31
00:02:01,879 --> 00:01:58,259
dying because they're taking drugs at

32
00:02:04,730 --> 00:02:01,889
pop concerts outside music events and so

33
00:02:07,129 --> 00:02:04,740
on now they don't know exactly what's in

34
00:02:08,960 --> 00:02:07,139
the drugs and there's a move to

35
00:02:12,930 --> 00:02:08,970
introduce pill testing at these events

36
00:02:15,900 --> 00:02:12,940
and there's large

37
00:02:17,820 --> 00:02:15,910
lobbie of people who won't have a bar of

38
00:02:22,950 --> 00:02:17,830

it who say we can't introduce pill

39

00:02:26,670 --> 00:02:22,960

testing put kids are dying a very vexed

40

00:02:29,119 --> 00:02:26,680

issue find out more later on with Trish

41

00:02:34,080 --> 00:02:31,710

what a wonderful Park Golden Gate Park

42

00:02:37,440 --> 00:02:34,090

is in San Francisco it's worth having a

43

00:02:40,140 --> 00:02:37,450

look on the map on Google Maps or map of

44

00:02:44,990 --> 00:02:40,150

your choice it's a huge enormous

45

00:02:50,460 --> 00:02:45,000

wonderful rolling Park here with the

46

00:02:53,009 --> 00:02:50,470

Botanical Gardens and squirrels and you

47

00:02:58,220 --> 00:02:53,019

can do things like rent a Segway and zip

48

00:03:01,110 --> 00:02:58,230

around so I am now approaching the

49

00:03:03,979 --> 00:03:01,120

Academy of Sciences

50

00:03:07,770 --> 00:03:03,989

you know I do that and walk inside and

51
00:03:09,940 --> 00:03:07,780
look for a donut I hope you enjoy the

52
00:03:24,230 --> 00:03:09,950
skeptical zone

53
00:03:24,240 --> 00:03:27,650
[Music]

54
00:03:33,090 --> 00:03:30,300
joining me from Albuquerque New Mexico

55
00:03:36,530 --> 00:03:33,100
it's one of the stars of squaring the

56
00:03:38,700 --> 00:03:36,540
strange Ben Radford hello Ben

57
00:03:42,000 --> 00:03:38,710
great to catch up with you know the

58
00:03:46,010 --> 00:03:42,010
reason I'm contacting you is because I

59
00:03:48,330 --> 00:03:46,020
was I was informed of a weird yo ii yo

60
00:03:50,850 --> 00:03:48,340
ii being sort of a bigfoot-type

61
00:03:54,210 --> 00:03:50,860
character story coming out of Australia

62
00:03:57,110 --> 00:03:54,220
and this I thought well who could I chat

63
00:04:00,000 --> 00:03:57,120

to who's an expert in cryptozoology ah

64

00:04:03,630 --> 00:04:00,010

Ben Radford and this has been a long

65

00:04:06,450 --> 00:04:03,640

long term interest of yours yes you know

66

00:04:10,070 --> 00:04:06,460

I've always been fascinated by by by the

67

00:04:11,910 --> 00:04:10,080

the more tangible things right and so

68

00:04:15,150 --> 00:04:11,920

I've always been a little less

69

00:04:17,039 --> 00:04:15,160

interested in UFOs and psychics for

70

00:04:18,840 --> 00:04:17,049

example because they're sort of they're

71

00:04:20,250 --> 00:04:18,850

sort of beyond our grasp you know

72

00:04:22,290 --> 00:04:20,260

they're they're not tangible but if

73

00:04:24,510 --> 00:04:22,300

you're looking at you know chupacabras

74

00:04:27,780 --> 00:04:24,520

and Lake Monsters and Bigfoot and Yowies

75

00:04:29,520 --> 00:04:27,790

in theory you could go and grab one and

76

00:04:33,840 --> 00:04:29,530

touch one and pet one if it'll let you I

77

00:04:36,180 --> 00:04:33,850

guess good point good point I mean in in

78

00:04:40,040 --> 00:04:36,190

theory they are quite tangible well if

79

00:04:44,370 --> 00:04:40,050

they existed I tell you what they did

80

00:04:47,100 --> 00:04:44,380

yes advisedly let me for the benefit of

81

00:04:53,860 --> 00:04:47,110

all this and this I'll read a portion of

82

00:05:02,180 --> 00:04:57,190

published on the 24th of January 2019

83

00:05:05,630 --> 00:05:02,190

written by Robin woth and appearing in

84

00:05:10,860 --> 00:05:05,640

the Korea newspaper Queensland

85

00:05:12,790 --> 00:05:10,870

trucky claims Yowie bashed his bonnet a

86

00:05:17,150 --> 00:05:12,800

[Music]

87

00:05:19,490 --> 00:05:17,160

Queensland Truckee o and Truckee in

88

00:05:21,890 --> 00:05:19,500

Australia means trucker in the United

89

00:05:25,070 --> 00:05:21,900

States we tend to put I e on the end of

90

00:05:27,590 --> 00:05:25,080

many words sometimes he put o and in

91

00:05:30,410 --> 00:05:27,600

this case its ie a Queensland and

92

00:05:34,090 --> 00:05:30,420

Queensland is this state the large state

93

00:05:38,810 --> 00:05:34,100

mostly tropical in the northern part of

94

00:05:42,050 --> 00:05:38,820

eastern Australia hmm a Queensland

95

00:05:44,720 --> 00:05:42,060

Truckee claims he eyeballs a hulking

96

00:05:47,810 --> 00:05:44,730

three meter tall Yowie in broad daylight

97

00:05:50,120 --> 00:05:47,820

before it punched his bonnet and melted

98

00:05:53,000 --> 00:05:50,130

into the bush the delivery driver

99

00:05:55,610 --> 00:05:53,010

identified only as Gary says he was

100

00:05:58,340 --> 00:05:55,620

driving in the bushy gold coast

101
00:06:01,100 --> 00:05:58,350
hinterland on a november morning last

102
00:06:05,120 --> 00:06:01,110
year when he rounded a sharp right bend

103
00:06:07,730 --> 00:06:05,130
at wither in' and had the experience of

104
00:06:10,280 --> 00:06:07,740
his life he slammed on the brakes after

105
00:06:12,830 --> 00:06:10,290
spotting what he thought was a boulder

106
00:06:17,870 --> 00:06:12,840
tumbling down a steep slope onto the

107
00:06:21,440 --> 00:06:17,880
road but then it moved gary says he

108
00:06:25,280 --> 00:06:21,450
watched as the creature unfurled huge

109
00:06:28,490 --> 00:06:25,290
hairy limbs limbs and stood upright

110
00:06:33,080 --> 00:06:28,500
before locking eyes with him through the

111
00:06:36,950 --> 00:06:33,090
trucks windscreen quote it wasn't a rock

112
00:06:39,830 --> 00:06:36,960
at all unquote gary has told yo'ii

113
00:06:43,670 --> 00:06:39,840

hunter Dean Harrison in an interview

114

00:06:45,650 --> 00:06:43,680

shared on social media quote this thing

115

00:06:48,620 --> 00:06:45,660

scared the absolute crap outta me man

116

00:06:53,230 --> 00:06:48,630

quote he said the creature was a

117

00:06:55,940 --> 00:06:53,240

towering beast its naval level

118

00:06:59,120 --> 00:06:55,950

he said the creature was a towering

119

00:07:02,210 --> 00:06:59,130

beast its naval level with the trucks

120

00:07:04,430 --> 00:07:02,220

bonnet 6 foot 1.8 meters off the ground

121

00:07:09,920 --> 00:07:04,440

and he reckons it would have

122

00:07:12,410 --> 00:07:09,930

Wade close to 400 kilos at first the

123

00:07:15,580 --> 00:07:12,420

Yowie with its small head and oversized

124

00:07:18,470 --> 00:07:15,590

body seemed somehow shocked or

125

00:07:22,850 --> 00:07:18,480

embarrassed as it stood in the full

126
00:07:23,240 --> 00:07:22,860
glare of day at 10 a.m. on that November

127
00:07:28,130 --> 00:07:23,250
morning

128
00:07:30,020 --> 00:07:28,140
but then it got mad quote he slept or

129
00:07:33,200 --> 00:07:30,030
punched the center of the bonnet of my

130
00:07:36,910 --> 00:07:33,210
truck it was like I had hit a small car

131
00:07:41,480 --> 00:07:36,920
in quote the truck he said quote he was

132
00:07:45,170 --> 00:07:41,490
so tall he had to reach down to hit the

133
00:07:48,770 --> 00:07:45,180
truck just before he hit the truck he

134
00:07:53,000 --> 00:07:48,780
grunted it wasn't a scream or a cry or a

135
00:07:55,640 --> 00:07:53,010
howl but a loud grunt it was hairy it

136
00:07:58,430 --> 00:07:55,650
had hair probably two inches long all

137
00:08:02,150 --> 00:07:58,440
over its body it had a round face like a

138
00:08:04,010 --> 00:08:02,160

chimpanzee and quote well gary was still

139

00:08:06,530 --> 00:08:04,020

trying to make sense of what he was

140

00:08:09,620 --> 00:08:06,540

seeing the creature turned and vanished

141

00:08:14,770 --> 00:08:09,630

into the bush Gary does not want to be

142

00:08:18,350 --> 00:08:14,780

identified fearing being labeled a loon

143

00:08:20,630 --> 00:08:18,360

mr. Harrison B gary hunter understands

144

00:08:23,810 --> 00:08:20,640

that but he's not bothered by those who

145

00:08:27,170 --> 00:08:23,820

doubt the Yowies existence he's sure

146

00:08:28,940 --> 00:08:27,180

they are out there having tracked scores

147

00:08:30,250 --> 00:08:28,950

of sighting across Australia for the

148

00:08:33,529 --> 00:08:30,260

last 20 years

149

00:08:36,339 --> 00:08:33,539

he says he's even been attacked by a

150

00:08:39,740 --> 00:08:36,349

Yowie not once but twice

151
00:08:42,320 --> 00:08:39,750
but as far as Yowie sightings go gary's

152
00:08:46,370 --> 00:08:42,330
is a good one mr. harrison says quote

153
00:08:49,970 --> 00:08:46,380
this is astounding he had such a clear

154
00:08:52,460 --> 00:08:49,980
view of it amazing unquote he told the

155
00:08:54,710 --> 00:08:52,470
Australian Associated Press adding the

156
00:08:58,530 --> 00:08:54,720
truck driver got such a good look at the

157
00:09:03,390 --> 00:08:58,540
creature that he was able to draw it

158
00:09:05,430 --> 00:09:03,400
and the article goes on there will be a

159
00:09:07,380 --> 00:09:05,440
link in this week's show notes you can

160
00:09:10,110 --> 00:09:07,390
read the rest of this thrilling story

161
00:09:13,920 --> 00:09:10,120
for yourself but I thought I would end

162
00:09:17,210 --> 00:09:13,930
this reading of the story with the final

163
00:09:20,520 --> 00:09:17,220

thought in this report

164

00:09:23,940 --> 00:09:20,530

why have no body's been found meaning

165

00:09:27,240 --> 00:09:23,950

our bodies mr. Harrison believes yaoi

166

00:09:29,230 --> 00:09:27,250

family groups operate as a community and

167

00:09:37,000 --> 00:09:29,240

take care of their dead

168

00:09:41,930 --> 00:09:39,230

whether you are been that was the report

169

00:09:51,560 --> 00:09:41,940

coming about out of Australia what did

170

00:09:53,900 --> 00:09:51,570

you make of that was impressive you know

171

00:09:57,680 --> 00:09:53,910

three meters nine feet tall that's

172

00:10:01,220 --> 00:09:57,690

that's about about the the typical size

173

00:10:04,579 --> 00:10:01,230

of the the Bigfoot Yowie that we're

174

00:10:07,699 --> 00:10:04,589

familiar with here but a couple red

175

00:10:11,120 --> 00:10:07,709

flags as well the first one was the

176
00:10:15,380 --> 00:10:11,130
anonymous source private we have a

177
00:10:19,060 --> 00:10:15,390
delivery driver named Gary I'm sure

178
00:10:22,190 --> 00:10:19,070
Gary's nice fella assuming he exists I

179
00:10:24,170 --> 00:10:22,200
have no reason to think that Gary is

180
00:10:24,740 --> 00:10:24,180
anything but an upstanding credible

181
00:10:30,829 --> 00:10:24,750
person

182
00:10:32,540 --> 00:10:30,839
assuming he exists but any time we're

183
00:10:34,400 --> 00:10:32,550
dealing with anonymous sources that's a

184
00:10:36,889 --> 00:10:34,410
big red flag because of course do you

185
00:10:38,690 --> 00:10:36,899
there's an there's a barrier between you

186
00:10:41,960 --> 00:10:38,700
and trying to you know get more

187
00:10:45,230 --> 00:10:41,970
information the second thing that jumped

188
00:10:47,660 --> 00:10:45,240

at me was we also don't know the date we

189

00:10:52,160 --> 00:10:47,670

were told that it was in November

190

00:10:53,860 --> 00:10:52,170

morning last year well okay so that was

191

00:10:56,690 --> 00:10:53,870

that was two months ago

192

00:10:59,480 --> 00:10:56,700

why are we only hearing about it now why

193

00:11:03,860 --> 00:10:59,490

why do we hear about it shortly after

194

00:11:05,300 --> 00:11:03,870

the after the incident so it's a little

195

00:11:07,010 --> 00:11:05,310

it's a little curious that doesn't mean

196

00:11:10,819 --> 00:11:07,020

it didn't happen of course but it just

197

00:11:13,340 --> 00:11:10,829

it's just a little sketchy for me could

198

00:11:15,380 --> 00:11:13,350

it be been and and I'm just sort of

199

00:11:17,690 --> 00:11:15,390

grabbed grasping straws here at the

200

00:11:21,470 --> 00:11:17,700

moment could it be that it's just a nice

201

00:11:24,380 --> 00:11:21,480

funny almost a feel-good story a bit

202

00:11:26,180 --> 00:11:24,390

weird and in Australia it's summertime

203

00:11:30,139 --> 00:11:26,190

which we call the silly season where

204

00:11:32,840 --> 00:11:30,149

news is a bit slow and I wondered why

205

00:11:37,819 --> 00:11:32,850

any any news agency would pick up such a

206

00:11:40,760 --> 00:11:37,829

funny story there is definitely a

207

00:11:43,430 --> 00:11:40,770

tendency in the news media especially to

208

00:11:46,230 --> 00:11:43,440

handle certain of these sort of weird or

209

00:11:48,420 --> 00:11:46,240

extraordinary claims as

210

00:11:50,519 --> 00:11:48,430

sort of a cute feature story you know

211

00:11:53,970 --> 00:11:50,529

it's a it's a human interest it's not

212

00:11:55,380 --> 00:11:53,980

it's not science capital s certainly not

213

00:11:57,570 --> 00:11:55,390

not of Sciences they would like to have

214

00:11:59,940 --> 00:11:57,580

it and I've seen that often and I know

215

00:12:01,650 --> 00:11:59,950

you have as well where journalists they

216

00:12:04,260 --> 00:12:01,660

sort of feel like they're given license

217

00:12:06,269 --> 00:12:04,270

they think well you know I'm not I'm not

218

00:12:10,140 --> 00:12:06,279

saying that yeah we definitely exist

219

00:12:13,530 --> 00:12:10,150

this is it's it's a fun story but to my

220

00:12:15,510 --> 00:12:13,540

mind the the same journalistic integrity

221

00:12:17,850 --> 00:12:15,520

should apply across the board so if

222

00:12:19,920 --> 00:12:17,860

you're if you're going to put this in a

223

00:12:22,230 --> 00:12:19,930

newspaper and you're gonna treat this as

224

00:12:23,490 --> 00:12:22,240

a credible account then it should be

225

00:12:25,829 --> 00:12:23,500

credible it shouldn't that there

226

00:12:27,930 --> 00:12:25,839

shouldn't be one standard for fun

227

00:12:29,340 --> 00:12:27,940

feature stories in other Stanford

228

00:12:31,140 --> 00:12:29,350

science stories especially if we're

229

00:12:33,690 --> 00:12:31,150

talking about something that allegedly

230

00:12:37,410 --> 00:12:33,700

exists and another point that occurred

231

00:12:40,290 --> 00:12:37,420

to me Ben if this is real this is a real

232

00:12:42,030 --> 00:12:40,300

thing happening then the police would

233

00:12:44,430 --> 00:12:42,040

have to be involved because this is a

234

00:12:47,490 --> 00:12:44,440

real danger and a real menace to the

235

00:12:49,440 --> 00:12:47,500

Australian public that's true that's

236

00:12:50,910 --> 00:12:49,450

true I mean this is the thing if you're

237

00:12:53,579 --> 00:12:50,920

gonna take these things seriously then

238

00:12:57,110 --> 00:12:53,589

we need to take them seriously I did

239

00:12:59,670 --> 00:12:57,120

notice that in the in in the news piece

240

00:13:02,880 --> 00:12:59,680

there is no photograph of the alleged

241

00:13:06,630 --> 00:13:02,890

damage to his toes the the front of us

242

00:13:10,260 --> 00:13:06,640

is vehicle there's a sketch which is you

243

00:13:12,420 --> 00:13:10,270

know a decent sketch I guess but it's

244

00:13:14,970 --> 00:13:12,430

curious that we don't actually see any

245

00:13:16,710 --> 00:13:14,980

photographs of the damage done by this

246

00:13:18,329 --> 00:13:16,720

Yowie I would I would think that

247

00:13:20,250 --> 00:13:18,339

probably pretty impressive and of course

248

00:13:23,250 --> 00:13:20,260

we might actually be able to determine

249

00:13:27,030 --> 00:13:23,260

we might be able to get hair samples or

250

00:13:29,850 --> 00:13:27,040

DNA samples or blood or something so the

251

00:13:33,480 --> 00:13:29,860

the fact that it's it's anonymous person

252

00:13:36,449 --> 00:13:33,490

that happened at an unknown date a few

253

00:13:40,019 --> 00:13:36,459

months ago and and is not accompanied by

254

00:13:43,560 --> 00:13:40,029

a photograph but a sketch this is shall

255

00:13:46,560 --> 00:13:43,570

we say sketchy sketchy and dare we say

256

00:13:52,110 --> 00:13:46,570

it's been we are maybe somewhat

257

00:13:54,060 --> 00:13:52,120

skeptical yes yes well I thought I'd

258

00:13:56,370 --> 00:13:54,070

chat to the man who certainly knows and

259

00:13:59,360 --> 00:13:56,380

just before we wrap it up how is

260

00:14:01,670 --> 00:13:59,370

squaring the strange going whoops

261

00:14:05,240 --> 00:14:01,680

right along thank you for asking yeah

262

00:14:08,060 --> 00:14:05,250

we're we're doing well we as you know he

263

00:14:10,400 --> 00:14:08,070

recently went to every two weeks which

264

00:14:13,370 --> 00:14:10,410

allowed the three of us myself and

265

00:14:16,700 --> 00:14:13,380

Pasquale Romero and Celestia to sort of

266

00:14:21,290 --> 00:14:16,710

have a more regular schedule around are

267

00:14:23,660 --> 00:14:21,300

a myriad myriad life duties including

268

00:14:26,660 --> 00:14:23,670

children and work and whatnot but we're

269

00:14:28,930 --> 00:14:26,670

plugging along and have some some fun

270

00:14:32,060 --> 00:14:28,940

episodes in the can coming up as well

271

00:14:33,950 --> 00:14:32,070

fantastic folks it's always good to

272

00:14:36,769 --> 00:14:33,960

listen to squaring the strange and it's

273

00:14:38,600 --> 00:14:36,779

always good to chat with Ben Radford Ben

274

00:14:39,710 --> 00:14:38,610

I look forward to having another talk

275

00:14:41,870 --> 00:14:39,720

with you soon

276

00:14:47,180 --> 00:14:41,880

well as soon as another Australian is

277

00:14:50,150 --> 00:14:47,190

attacked by some mythical creature Ben

278

00:14:59,850 --> 00:14:50,160

Radford thank you very much

279

00:15:05,350 --> 00:15:03,220

hey fellow skeptics in Radford here with

280

00:15:07,600 --> 00:15:05,360

Celeste reward your friendly host of

281

00:15:09,879 --> 00:15:07,610

scaring the strange a podcast that looks

282

00:15:12,579 --> 00:15:09,889

at topics ranging from legends panics

283

00:15:14,439 --> 00:15:12,589

and cryptids 3d myths psychology and

284

00:15:16,569 --> 00:15:14,449

folklore breaking things down and

285

00:15:18,730 --> 00:15:16,579

picking things apart as we skeptics do

286

00:15:21,309 --> 00:15:18,740

we bring a few different perspectives on

287

00:15:23,410 --> 00:15:21,319

things cluster for example is a witty

288

00:15:25,809 --> 00:15:23,420

cartoonist and Ben is a brilliant writer

289

00:15:27,519 --> 00:15:25,819

and longtime sceptical investigator we

290

00:15:30,009 --> 00:15:27,529

don't always agree but we have fun

291

00:15:32,259 --> 00:15:30,019

trying and we learn new things join us

292

00:15:34,600 --> 00:15:32,269

for new topics every week or two or

293

00:15:37,840 --> 00:15:34,610

browse our backlog of evergreen episodes

294

00:15:39,939 --> 00:15:37,850

available on iTunes and all your podcast

295

00:15:46,100 --> 00:15:39,949

feeding troughs squaring the strange

296

00:15:46,110 --> 00:15:53,150

[Music]

297

00:16:09,510 --> 00:16:02,490

hmm let's have some Trish and chips his

298

00:16:12,240 --> 00:16:09,520

Trish Han so I'm here on this lovely hot

299

00:16:14,640 --> 00:16:12,250

summer's day in Australia's festival

300

00:16:19,950 --> 00:16:14,650

season to talk with dr. Brad Makai I'm

301

00:16:21,180 --> 00:16:19,960

melting it's boiling and it's that time

302

00:16:23,100 --> 00:16:21,190

of year for those in the northern

303

00:16:25,620 --> 00:16:23,110

hemisphere where we all reach about 40

304

00:16:27,300 --> 00:16:25,630

degrees and a lot of people choose to

305

00:16:29,580 --> 00:16:27,310

spend their time outside in a field

306

00:16:33,960 --> 00:16:29,590

listening to some questionably good

307

00:16:35,460 --> 00:16:33,970

music there is all sorts of different

308

00:16:37,550 --> 00:16:35,470

music festivals out of the moments

309

00:16:40,530 --> 00:16:37,560

absolutely all across the whole country

310

00:16:43,020 --> 00:16:40,540

New South Wales has is it 3 on just this

311

00:16:44,730 --> 00:16:43,030

weekend 3 this weekend yes yeah we're

312

00:16:47,190 --> 00:16:44,740

worried what's gonna be happening to the

313

00:16:50,220 --> 00:16:47,200

youth of today and they will be

314

00:16:52,080 --> 00:16:50,230

surviving through this heat yeah not

315

00:16:54,180 --> 00:16:52,090

just because the hot day but also if

316

00:16:57,620 --> 00:16:54,190

they've been taking drugs at festivals -

317

00:17:00,990 --> 00:16:57,630

yes so last weekend recently there was a

318

00:17:03,120 --> 00:17:01,000

protest I understand about trying to

319

00:17:04,319 --> 00:17:03,130

encourage government specifically here

320

00:17:07,860 --> 00:17:04,329

in New South Wales but also why the

321

00:17:09,540 --> 00:17:07,870

government to introduce pill testing so

322

00:17:11,400 --> 00:17:09,550

I thought we just talk about what what

323

00:17:13,079 --> 00:17:11,410

is pill testing why do we think it's

324

00:17:15,689 --> 00:17:13,089

necessary is it necessary

325

00:17:17,220 --> 00:17:15,699

etc etc we're not talking about drug

326

00:17:19,579 --> 00:17:17,230

testing obviously drug testing is very

327

00:17:21,449 --> 00:17:19,589

different that sounds very police

328

00:17:24,240 --> 00:17:21,459

orientated this is a different thing

329

00:17:26,189 --> 00:17:24,250

entirely so this is testing what's in a

330

00:17:29,130 --> 00:17:26,199

pill that someone may have bought either

331

00:17:32,250 --> 00:17:29,140

online or at festivals so yeah well be

332

00:17:36,210 --> 00:17:32,260

more well in Australia we've had one

333

00:17:39,450 --> 00:17:36,220

trial so far so last year so 2018 in

334

00:17:42,120 --> 00:17:39,460

April there was one pill testing event

335

00:17:44,310 --> 00:17:42,130

that was able to be done officially in

336

00:17:47,040 --> 00:17:44,320

Canberra at a festival called groove in

337

00:17:48,840 --> 00:17:47,050

the mood and yeah they they had heaps of

338

00:17:53,370 --> 00:17:48,850

people queuing up to have their pills

339

00:17:55,680 --> 00:17:53,380

tested so that's one so far but we've

340

00:17:57,690 --> 00:17:55,690

had pill testing or drug testing for a

341

00:17:59,100 --> 00:17:57,700

long time overseas so even in the

342

00:18:02,940 --> 00:17:59,110

Netherlands that's been available since

343

00:18:04,530 --> 00:18:02,950

the early 90s the technology has changed

344

00:18:07,050 --> 00:18:04,540

quite a little bit quite a bit in that

345

00:18:09,540 --> 00:18:07,060

time yeah so certainly in the first

346

00:18:11,760 --> 00:18:09,550

instance we were using reagent kits yeah

347

00:18:13,500 --> 00:18:11,770

so basically you could put it on filter

348

00:18:15,240 --> 00:18:13,510

paper and then if the filter paper goes

349

00:18:16,800 --> 00:18:15,250

a certain color then you could work out

350

00:18:18,960 --> 00:18:16,810

if it was going to be cocaine that was

351

00:18:22,050 --> 00:18:18,970

in like the the powder that you've got

352

00:18:24,090 --> 00:18:22,060

or if words MDMA or ecstasy or something

353

00:18:25,770 --> 00:18:24,100

else and that's the same kind of thing

354

00:18:27,210 --> 00:18:25,780

that we do say at the border or if the

355

00:18:28,740 --> 00:18:27,220

police stopped you to see what that

356

00:18:30,780 --> 00:18:28,750

thing what they were gonna charge you

357

00:18:33,960 --> 00:18:30,790

with carrying right yeah so it takes

358

00:18:36,240 --> 00:18:33,970

takes a few minutes to do you can order

359

00:18:38,960 --> 00:18:36,250

kits online and do it at home a few so

360

00:18:41,610 --> 00:18:38,970

desire and that's all fine and dandy but

361

00:18:43,320 --> 00:18:41,620

what we've been using around the world

362

00:18:46,410 --> 00:18:43,330

for for quite a few years is a

363

00:18:48,930 --> 00:18:46,420

spectroscopy machine so shining an

364

00:18:50,940 --> 00:18:48,940

infrared light at a small amount of

365

00:18:52,890 --> 00:18:50,950

powder or part of a pill that you've

366

00:18:56,610 --> 00:18:52,900

that you've got a sample from and then

367

00:18:58,890 --> 00:18:56,620

you can get a I'm not a scientist regard

368

00:19:01,230 --> 00:18:58,900

the way that I understand it is very

369

00:19:03,120 --> 00:19:01,240

simple and it's like getting a like a

370

00:19:04,920 --> 00:19:03,130

fingerprint of the chemical that's in

371

00:19:06,930 --> 00:19:04,930

front of you so you can sort of see if

372

00:19:09,150 --> 00:19:06,940

there's a pattern that's equivalent to

373

00:19:12,840 --> 00:19:09,160

having MDMA or if it's just talcum

374

00:19:16,260 --> 00:19:12,850

powder or if it's paint or or I don't

375

00:19:19,050 --> 00:19:16,270

know hydro light electrolyte liquid or

376

00:19:22,130 --> 00:19:19,060

powder that's there so you can you can

377

00:19:25,260 --> 00:19:22,140

find out exactly what that substance is

378

00:19:26,400 --> 00:19:25,270

and then there's also a whole range of

379

00:19:29,250 --> 00:19:26,410

different techniques that are being used

380

00:19:30,810 --> 00:19:29,260

in England particularly and I've been

381

00:19:34,320 --> 00:19:30,820

working with a group called the

382

00:19:35,760 --> 00:19:34,330

loop-the-loop UK was the first version

383

00:19:38,190 --> 00:19:35,770

of that and we've now got the loop

384

00:19:40,350 --> 00:19:38,200

Australia and it's using both

385

00:19:42,600 --> 00:19:40,360

spectroscopy machines so you can find

386

00:19:45,210 --> 00:19:42,610

out that digital signature but then also

387

00:19:47,190 --> 00:19:45,220

using the powder and finding out the

388

00:19:49,350 --> 00:19:47,200

quantity of what's there as well and

389

00:19:51,690 --> 00:19:49,360

there's a lot of debate about whether we

390

00:19:53,970 --> 00:19:51,700

can find out how much MDMA is in a

391

00:19:55,110 --> 00:19:53,980

tablet or not but certainly that that is

392

00:19:57,380 --> 00:19:55,120

a possibility

393

00:20:00,450 --> 00:19:57,390

to do it if you've got some brilliant

394

00:20:02,310 --> 00:20:00,460

chemists available and experts in their

395

00:20:04,350 --> 00:20:02,320

field then you know we can work that out

396

00:20:06,840 --> 00:20:04,360

it takes about 20 minutes to use the

397

00:20:09,030 --> 00:20:06,850

spectroscopy machine and about like 40

398

00:20:12,570 --> 00:20:09,040

minutes or so to figure out the quantity

399

00:20:14,350 --> 00:20:12,580

so the actual milligram can dead a pill

400

00:20:16,120 --> 00:20:14,360

contains of a particular

401

00:20:17,680 --> 00:20:16,130

brilliant so and this is entirely

402

00:20:19,210 --> 00:20:17,690

portable right so you're not having to

403

00:20:20,530 --> 00:20:19,220

send it off to a lab you're not having

404

00:20:22,360 --> 00:20:20,540

to wait for the results and then come

405

00:20:24,040 --> 00:20:22,370

back by motorbike courier you can do it

406

00:20:27,070 --> 00:20:24,050

all in the field at the festival with a

407

00:20:29,590 --> 00:20:27,080

music playing yeah so all of this is

408

00:20:31,030 --> 00:20:29,600

portable I'm the gold standard for

409

00:20:32,920 --> 00:20:31,040

finding out what's in a tablet or in

410

00:20:35,290 --> 00:20:32,930

powder is really sending it off to a

411

00:20:38,410 --> 00:20:35,300

university laboratory and using big

412

00:20:40,060 --> 00:20:38,420

fancy machines that go Bing and that can

413

00:20:42,010 --> 00:20:40,070

take even a few days for all of those

414

00:20:44,380 --> 00:20:42,020

results to come back so we don't have

415

00:20:46,060 --> 00:20:44,390

that portable at the moment I think we

416

00:20:48,400 --> 00:20:46,070

could for about half a million dollars

417

00:20:52,600 --> 00:20:48,410

but we're still working on that one

418

00:20:54,250 --> 00:20:52,610

for the moment and but well it a lot of

419

00:20:55,810 --> 00:20:54,260

people criticize it saying oh well if

420

00:20:59,590 --> 00:20:55,820

you've just got a spectroscopy machine

421

00:21:01,030 --> 00:20:59,600

then what's the use of that well well we

422

00:21:03,490 --> 00:21:01,040

might not have the gold standard that we

423

00:21:04,960 --> 00:21:03,500

can take out to a lab but that we can

424

00:21:06,430 --> 00:21:04,970

take out them to the field from a lab

425

00:21:08,200 --> 00:21:06,440

but at least we can give a bit of an

426

00:21:09,760 --> 00:21:08,210

idea to people who are going to

427

00:21:13,480 --> 00:21:09,770

festivals about what what their pills

428

00:21:16,060 --> 00:21:13,490

contain so and why I'm speaking to maybe

429

00:21:18,250 --> 00:21:16,070

an audience who may not take pills may

430

00:21:19,810 --> 00:21:18,260

not understand kind of what those risks

431

00:21:22,890 --> 00:21:19,820

are we're not talking about necessarily

432

00:21:25,300 --> 00:21:22,900

people taking pure MDMA and then

433

00:21:26,740 --> 00:21:25,310

overdosing necessarily to you know

434

00:21:28,480 --> 00:21:26,750

you're buying drugs at a festival there

435

00:21:30,250 --> 00:21:28,490

could be anything in them right so we're

436

00:21:32,590 --> 00:21:30,260

talking like kind of what things like

437

00:21:34,960 --> 00:21:32,600

fentanyl maybe or other opiates that

438

00:21:39,250 --> 00:21:34,970

kind of stuff or even just understand

439

00:21:43,180 --> 00:21:39,260

the talcum powder what are the risk yeah

440

00:21:45,190 --> 00:21:43,190

so some people will buy pills external

441

00:21:47,230 --> 00:21:45,200

to a festival and so they may have their

442

00:21:50,200 --> 00:21:47,240

regular dealer and they're very happy to

443

00:21:52,030 --> 00:21:50,210

to get their pills from that person what

444

00:21:54,730 --> 00:21:52,040

we find from research is that you're

445

00:21:56,980 --> 00:21:54,740

more likely to get what you're expecting

446

00:21:59,260 --> 00:21:56,990

if you're buying it externally if you

447

00:22:02,380 --> 00:21:59,270

are actually buying it in a festival

448

00:22:05,050 --> 00:22:02,390

when you're passed the sniffer dogs and

449

00:22:08,530 --> 00:22:05,060

past the police and pass the bag chicks

450

00:22:10,510 --> 00:22:08,540

then you do really unlikely to get what

451
00:22:12,520 --> 00:22:10,520
you're paying for so this is a research

452
00:22:13,930 --> 00:22:12,530
that's been done out of the UK finding

453
00:22:16,240 --> 00:22:13,940
that yeah maybe fifty percent of what

454
00:22:17,620 --> 00:22:16,250
you're getting within a festival was

455
00:22:18,310 --> 00:22:17,630
actually what you were what you're

456
00:22:19,930 --> 00:22:18,320
expecting

457
00:22:21,610 --> 00:22:19,940
yeah and the whole thing was like yeah

458
00:22:24,760 --> 00:22:21,620
back in the 90s everyone was saying oh

459
00:22:25,210 --> 00:22:24,770
yeah MDMA was and in small doses and

460
00:22:28,299 --> 00:22:25,220
everyone

461
00:22:30,580 --> 00:22:28,309
a good time and yeah there weren't too

462
00:22:33,490 --> 00:22:30,590
many problems there's still a few deaths

463
00:22:35,110 --> 00:22:33,500

around the 90s I'm sure yeah but yeah

464

00:22:37,510 --> 00:22:35,120

like these days it's really weird like

465

00:22:39,909 --> 00:22:37,520

the amount of of different chemicals

466

00:22:42,760 --> 00:22:39,919

that are on pills has just exponentially

467

00:22:44,680 --> 00:22:42,770

increased so you're really not knowing

468

00:22:46,960 --> 00:22:44,690

what you're getting one of the drugs

469

00:22:49,240 --> 00:22:46,970

that spin around is called in ethyl pent

470

00:22:52,000 --> 00:22:49,250

alone which gives people a bit of a high

471

00:22:55,960 --> 00:22:52,010

for a few hours and makes them feel like

472

00:22:58,029 --> 00:22:55,970

they're on ecstasy but then their wake

473

00:23:00,460 --> 00:22:58,039

for three days and they've got a high

474

00:23:02,529 --> 00:23:00,470

chance of having a psychotic episode as

475

00:23:04,090 --> 00:23:02,539

well so we sometimes do see people

476
00:23:07,029 --> 00:23:04,100
rocking up to the emergency department

477
00:23:09,700 --> 00:23:07,039
going oh my god I can't sleep and the

478
00:23:11,590 --> 00:23:09,710
demons keep on attacking me so yeah so

479
00:23:13,510 --> 00:23:11,600
there that's really not what people are

480
00:23:15,700 --> 00:23:13,520
wanting if they're if they're having

481
00:23:18,010 --> 00:23:15,710
ecstasy and they're wanting a fun time

482
00:23:20,250 --> 00:23:18,020
at a festival normally it would work to

483
00:23:23,049 --> 00:23:20,260
give them a high for two or three hours

484
00:23:25,870 --> 00:23:23,059
but not yeah not for three days of

485
00:23:27,669 --> 00:23:25,880
psychosis and I understand that like in

486
00:23:30,610 --> 00:23:27,679
this festival season we've already had

487
00:23:32,260 --> 00:23:30,620
six deaths here in Australia of young

488
00:23:34,090 --> 00:23:32,270

people who have gone out to have a good

489

00:23:37,000 --> 00:23:34,100

time and the price they paid for that

490

00:23:38,770 --> 00:23:37,010

husband the ultimate price so obviously

491

00:23:41,049 --> 00:23:38,780

what we're talking about here with pill

492

00:23:43,180 --> 00:23:41,059

testing isn't necessarily to say to

493

00:23:45,010 --> 00:23:43,190

people I hate these drugs are safe it's

494

00:23:46,870 --> 00:23:45,020

about harm minimisation right so it's

495

00:23:48,070 --> 00:23:46,880

about making sure that they know what's

496

00:23:50,260 --> 00:23:48,080

in it then they can make an educated

497

00:23:52,120 --> 00:23:50,270

decision rather than just a guess yeah

498

00:23:54,669 --> 00:23:52,130

every country seems to have their own

499

00:23:58,120 --> 00:23:54,679

little debate about it and there's some

500

00:23:59,890 --> 00:23:58,130

local issues that develop and local

501
00:24:02,799 --> 00:23:59,900
language and so for some reason in

502
00:24:05,740 --> 00:24:02,809
Australia safe has become a really dirty

503
00:24:09,000 --> 00:24:05,750
word so over in the UK they were talking

504
00:24:12,760 --> 00:24:09,010
about drugs safety testing so mainly

505
00:24:14,169 --> 00:24:12,770
providing safety for people but then in

506
00:24:15,580 --> 00:24:14,179
Australia the whole language has been

507
00:24:17,020 --> 00:24:15,590
changed and now we're debating it

508
00:24:18,970 --> 00:24:17,030
because people are thinking that we're

509
00:24:21,340 --> 00:24:18,980
going to be checking pills and making

510
00:24:24,490 --> 00:24:21,350
sure that that particular pill is safe

511
00:24:27,490 --> 00:24:24,500
for somebody to take yeah but we're here

512
00:24:29,440 --> 00:24:27,500
across the board with every pill testing

513
00:24:32,020 --> 00:24:29,450

service around the world we don't say

514

00:24:34,630 --> 00:24:32,030

that a pill is safe we're saying okay

515

00:24:37,870 --> 00:24:34,640

well this this these are the ingredients

516

00:24:38,909 --> 00:24:37,880

this is what we expect the dose would be

517

00:24:42,599 --> 00:24:38,919

in this batch

518

00:24:44,399 --> 00:24:42,609

pihl's no drug-taking is safe we can't

519

00:24:46,289 --> 00:24:44,409

say that if you're if you're making

520

00:24:47,940 --> 00:24:46,299

these pills and your grandmother's

521

00:24:49,649 --> 00:24:47,950

garage and that there's going to be any

522

00:24:50,999 --> 00:24:49,659

consistency with the drugs or that it's

523

00:24:53,099 --> 00:24:51,009

gonna be like exactly what you're

524

00:24:55,379 --> 00:24:53,109

thinking it can be we can give an idea

525

00:24:57,690 --> 00:24:55,389

but nobody's ever gonna say yeah this

526

00:25:01,019 --> 00:24:57,700

this drug that's made in a bad backyard

527

00:25:02,609 --> 00:25:01,029

lab is gonna be safe for you and there

528

00:25:04,649 --> 00:25:02,619

seems to be this weird sort of political

529

00:25:06,539 --> 00:25:04,659

divide at the moment with this

530

00:25:08,759 --> 00:25:06,549

discussion is that do you think because

531

00:25:10,799 --> 00:25:08,769

politicians are hesitant to see to be

532

00:25:12,029 --> 00:25:10,809

seen as encouraging drug use and they

533

00:25:13,349 --> 00:25:12,039

think that this will encourage it or do

534

00:25:14,820 --> 00:25:13,359

you think it's more that they don't want

535

00:25:18,479 --> 00:25:14,830

to touch the subject of drugs whatsoever

536

00:25:21,330 --> 00:25:18,489

I think it's multifaceted so one aspect

537

00:25:24,419 --> 00:25:21,340

of it is if somebody did have a pill

538

00:25:26,159 --> 00:25:24,429

checked and and this is what the

539

00:25:28,139 --> 00:25:26,169

politicians are saying if that person

540

00:25:32,310 --> 00:25:28,149

was told that their their pill was safe

541

00:25:36,659 --> 00:25:32,320

which we'd never say and then they ended

542

00:25:39,149 --> 00:25:36,669

up dying from having that pill then they

543

00:25:41,009 --> 00:25:39,159

could be held liable for it so they're

544

00:25:42,960 --> 00:25:41,019

not wanting to have that green light as

545

00:25:44,369 --> 00:25:42,970

they say to drugs but that's basically

546

00:25:46,379 --> 00:25:44,379

because they don't understand the the

547

00:25:47,940 --> 00:25:46,389

purpose of it so other people say well

548

00:25:49,529 --> 00:25:47,950

why should we have pill testing if we're

549

00:25:52,979 --> 00:25:49,539

just gonna tell everybody that their

550

00:25:54,450 --> 00:25:52,989

drugs are not being safe and again like

551
00:25:56,909 --> 00:25:54,460
that's not really what the systems for

552
00:25:58,799 --> 00:25:56,919
yeah and from a skeptical one of you

553
00:26:01,289 --> 00:25:58,809
like this is really about finding

554
00:26:03,330 --> 00:26:01,299
information and knowledge and helping

555
00:26:05,009 --> 00:26:03,340
people to make a decision based on

556
00:26:06,539 --> 00:26:05,019
what's in front of them

557
00:26:08,279 --> 00:26:06,549
yeah so if you've got somebody with a

558
00:26:09,960 --> 00:26:08,289
pill and they have no idea what's what's

559
00:26:11,340 --> 00:26:09,970
in it and they're gonna take it anyway

560
00:26:14,399 --> 00:26:11,350
because that are there at a festival

561
00:26:16,769 --> 00:26:14,409
they've spent \$30 to buy a pill to have

562
00:26:18,720 --> 00:26:16,779
three hours of fun then yeah that

563
00:26:20,609 --> 00:26:18,730

they're about to take it but pill

564

00:26:23,340 --> 00:26:20,619

testing comes in at that time and sort

565

00:26:25,139 --> 00:26:23,350

of goes okay well let's have a look at

566

00:26:27,180 --> 00:26:25,149

it let's see if we can change your mind

567

00:26:29,759 --> 00:26:27,190

let's give you some knowledge yeah an

568

00:26:31,619 --> 00:26:29,769

understanding about what's here and we

569

00:26:34,349 --> 00:26:31,629

find that the vast majority of people

570

00:26:37,320 --> 00:26:34,359

who have their pills tested and it's not

571

00:26:39,570 --> 00:26:37,330

what they're expecting they they don't

572

00:26:41,789 --> 00:26:39,580

take it or they modify their use for it

573

00:26:43,499 --> 00:26:41,799

if we're able to find the quantity of it

574

00:26:45,419 --> 00:26:43,509

as well so if we're finding that a pill

575

00:26:48,479 --> 00:26:45,429

has about four times the dose of what

576
00:26:50,540 --> 00:26:48,489
would be an expected pill of MDMA and

577
00:26:53,600 --> 00:26:50,550
then we can actually say look that

578
00:26:56,600 --> 00:26:53,610
this is this is likely to be quite a

579
00:26:59,120 --> 00:26:56,610
strong kill we don't advise taking it

580
00:27:01,220 --> 00:26:59,130
but hey if you're gonna take it then

581
00:27:03,380 --> 00:27:01,230
don't take the whole freaking thing like

582
00:27:05,120 --> 00:27:03,390
maybe if you broke it into half water

583
00:27:07,460 --> 00:27:05,130
don't make your own independent

584
00:27:09,170 --> 00:27:07,470
estrogens but yeah like it just go

585
00:27:10,460 --> 00:27:09,180
really slowly with it and so that's when

586
00:27:12,860 --> 00:27:10,470
pill Kristin can really make a

587
00:27:14,840 --> 00:27:12,870
difference yes like it and some people

588
00:27:16,910 --> 00:27:14,850

will go into a festival and they'll

589

00:27:18,560 --> 00:27:16,920

double drop or triple drop me yet so

590

00:27:20,540 --> 00:27:18,570

taking two or three pills before they're

591

00:27:22,820 --> 00:27:20,550

even getting through the gates often

592

00:27:24,830 --> 00:27:22,830

people get worried about sniffer dog yes

593

00:27:26,710 --> 00:27:24,840

that are at the at the front entrance

594

00:27:29,150 --> 00:27:26,720

and so they're taking all of their drugs

595

00:27:31,130 --> 00:27:29,160

because they don't want to be found with

596

00:27:32,720 --> 00:27:31,140

them on them so then if you've got a

597

00:27:34,550 --> 00:27:32,730

pill that's four times the dose and

598

00:27:37,250 --> 00:27:34,560

you're taking three of them before

599

00:27:39,530 --> 00:27:37,260

you're going past a dog dog that's

600

00:27:41,060 --> 00:27:39,540

sniffing your ankles yeah then yeah this

601
00:27:42,770 --> 00:27:41,070
is when a lot of people do get into

602
00:27:45,050 --> 00:27:42,780
trouble because they're having too much

603
00:27:48,860 --> 00:27:45,060
too quickly and then ending up in the

604
00:27:51,200 --> 00:27:48,870
medical tent or worse dead yeah and so a

605
00:27:53,120 --> 00:27:51,210
comparison that I quite like to make is

606
00:27:54,650 --> 00:27:53,130
that when you buy when you're a festival

607
00:27:56,780 --> 00:27:54,660
and you go up to the bar and you buy a

608
00:27:58,280 --> 00:27:56,790
bottle of beer everything on the back of

609
00:28:00,290 --> 00:27:58,290
that bottle is listed it tells you not

610
00:28:02,420 --> 00:28:00,300
only the alcohol content but it'll tell

611
00:28:03,350 --> 00:28:02,430
you they'll be gluten free you know I'll

612
00:28:04,640 --> 00:28:03,360
tell you whether that's gluten and

613
00:28:06,380 --> 00:28:04,650

they'll tell you whether there's all

614

00:28:08,120 --> 00:28:06,390

sorts of stuff in there and you can get

615

00:28:09,500 --> 00:28:08,130

you know paleo beers all that kind of

616

00:28:11,540 --> 00:28:09,510

stuff as well so it tells you everything

617

00:28:13,430 --> 00:28:11,550

that's in that bottle of beer same with

618

00:28:15,230 --> 00:28:13,440

cigarettes nowadays compared to the old

619

00:28:16,250 --> 00:28:15,240

days we now know every item it's and

620

00:28:18,680 --> 00:28:16,260

cigarettes and obviously they're still

621

00:28:20,600 --> 00:28:18,690

very harmful but you know about it no

622

00:28:23,030 --> 00:28:20,610

one's ever gonna say cigarettes are safe

623

00:28:24,590 --> 00:28:23,040

they are probably safer than they used

624

00:28:26,660 --> 00:28:24,600

to be say 50 years back but they're

625

00:28:28,670 --> 00:28:26,670

certainly not safe but yet we legitimize

626

00:28:30,740 --> 00:28:28,680

them we taxed them we sell them because

627

00:28:32,450 --> 00:28:30,750

we know what's meant what's in them

628

00:28:34,250 --> 00:28:32,460

they're made in the factories and that

629

00:28:35,810 --> 00:28:34,260

kind of thing right so we're not saying

630

00:28:39,110 --> 00:28:35,820

that at this point we want to

631

00:28:40,520 --> 00:28:39,120

necessarily you know federalize drugs

632

00:28:41,690 --> 00:28:40,530

and make it kind of a thing made by the

633

00:28:44,150 --> 00:28:41,700

government and sold by the government

634

00:28:47,240 --> 00:28:44,160

but people will continue to make and

635

00:28:49,640 --> 00:28:47,250

profit from illicit drugs so harm

636

00:28:51,740 --> 00:28:49,650

reduction is definitely a thing that is

637

00:28:54,140 --> 00:28:51,750

worth doing right and and as skeptics

638

00:28:56,210 --> 00:28:54,150

and as skeptics within medicine we're

639

00:28:57,390 --> 00:28:56,220

both pretty keen on harm reduction mmm

640

00:28:59,850 --> 00:28:57,400

well some of the arguments

641

00:29:01,110 --> 00:28:59,860

so well well drugs are illegal so don't

642

00:29:02,970 --> 00:29:01,120

take them yeah it's your fault so you

643

00:29:03,420 --> 00:29:02,980

know if you die that's your own freaking

644

00:29:05,460 --> 00:29:03,430

you fault

645

00:29:08,610 --> 00:29:05,470

whereas I sort of think well yeah no

646

00:29:11,700 --> 00:29:08,620

edges 18 year olds probably aren't gonna

647

00:29:13,770 --> 00:29:11,710

be well and mature by that time and your

648

00:29:16,350 --> 00:29:13,780

brain keeps on developing until at least

649

00:29:19,140 --> 00:29:16,360

25 yeah for some people a lot more than

650

00:29:20,490 --> 00:29:19,150

that so yeah if you're making a dumb

651
00:29:22,830 --> 00:29:20,500
mistake and taking something that's

652
00:29:24,980 --> 00:29:22,840
illegal when you're 18 I don't think

653
00:29:27,630 --> 00:29:24,990
that you shouldn't have to die like that

654
00:29:29,280 --> 00:29:27,640
but it's also like the from a from a

655
00:29:31,380 --> 00:29:29,290
scientific perspective what makes one

656
00:29:33,630 --> 00:29:31,390
drug illegal and the next the next thing

657
00:29:35,670 --> 00:29:33,640
not that we know that alcohol causes far

658
00:29:37,740 --> 00:29:35,680
more problems than MDMA or even

659
00:29:39,960 --> 00:29:37,750
methamphetamine and society so we have

660
00:29:42,030 --> 00:29:39,970
about 6,000 plus deaths in Australia

661
00:29:44,400 --> 00:29:42,040
every year that have just attributed to

662
00:29:46,740 --> 00:29:44,410
alcohol yeah it's the like after

663
00:29:50,220 --> 00:29:46,750

cigarettes alcohol is the second most

664

00:29:52,800 --> 00:29:50,230

common cause of cancer yeah so like it's

665

00:29:54,900 --> 00:29:52,810

not safe even though it's legal yeah um

666

00:29:57,570 --> 00:29:54,910

so yeah just putting a scientific

667

00:29:59,460 --> 00:29:57,580

glasses on and yeah taking the the

668

00:30:00,510 --> 00:29:59,470

legality out of it I think that we

669

00:30:02,460 --> 00:30:00,520

should be able to provide information

670

00:30:04,800 --> 00:30:02,470

for people and then helping them to

671

00:30:05,850 --> 00:30:04,810

judge whether they're going to be taking

672

00:30:07,680 --> 00:30:05,860

their substance or not

673

00:30:09,480 --> 00:30:07,690

yeah and it's treating people like

674

00:30:12,510 --> 00:30:09,490

adults and giving the responsibility

675

00:30:14,070 --> 00:30:12,520

back to them if someone is told hey this

676

00:30:16,670 --> 00:30:14,080

this drug this pill that you've bought

677

00:30:21,510 --> 00:30:16,680

has got rat poison in it and it's got

678

00:30:23,160 --> 00:30:21,520

don't take it right you tell them what's

679

00:30:25,470 --> 00:30:23,170

in it and that's I think maybe something

680

00:30:26,760 --> 00:30:25,480

which I've read a lot of sort of the

681

00:30:28,680 --> 00:30:26,770

older politicians are saying you know oh

682

00:30:30,930 --> 00:30:28,690

no no one's gonna throw away something

683

00:30:32,490 --> 00:30:30,940

they've paid 30 bucks for if it's gonna

684

00:30:34,620 --> 00:30:32,500

kill them they probably will right

685

00:30:36,210 --> 00:30:34,630

people people don't want to kill their

686

00:30:39,420 --> 00:30:36,220

friends no and they don't want to kill

687

00:30:42,000 --> 00:30:39,430

themselves so we and we know from from

688

00:30:43,710 --> 00:30:42,010

UK studies and yes studies all around

689

00:30:45,870 --> 00:30:43,720

Europe that about two-thirds of people

690

00:30:47,010 --> 00:30:45,880

will like dump their drugs so if they

691

00:30:49,590 --> 00:30:47,020

find out that it's not what they

692

00:30:50,870 --> 00:30:49,600

expected the other third we sort of go

693

00:30:52,740 --> 00:30:50,880

okay what are they going to be doing

694

00:30:54,450 --> 00:30:52,750

sometimes they might find that it's

695

00:30:56,070 --> 00:30:54,460

ketamine rather than MDMA and they'll go

696

00:30:59,700 --> 00:30:56,080

oh well I'll take that then but that's

697

00:31:01,170 --> 00:30:59,710

behind yeah we don't condone I mean but

698

00:31:03,240 --> 00:31:01,180

yeah like at least they'll know what to

699

00:31:05,160 --> 00:31:03,250

expect and maybe not freak out as much

700

00:31:06,980 --> 00:31:05,170

if they have a different reaction could

701
00:31:08,419 --> 00:31:06,990
compared to what they're expecting

702
00:31:09,740 --> 00:31:08,429
it was my colleagues in the emergency

703
00:31:11,690 --> 00:31:09,750
department that when they turn up they

704
00:31:13,820 --> 00:31:11,700
can say this is what I took rather than

705
00:31:16,580 --> 00:31:13,830
it was white and had a smiley face on it

706
00:31:18,830 --> 00:31:16,590
exactly yeah so it helps us as medical

707
00:31:20,810 --> 00:31:18,840
professionals being able to treat people

708
00:31:22,790 --> 00:31:20,820
if we know what they're what they're

709
00:31:25,549 --> 00:31:22,800
having and we know how long this is

710
00:31:27,490 --> 00:31:25,559
expected to last for yeah yeah so but

711
00:31:29,720 --> 00:31:27,500
the the other part of it is is that

712
00:31:31,100 --> 00:31:29,730
there's also this weird feedback

713
00:31:33,799 --> 00:31:31,110

mechanism that we don't often talk about

714

00:31:35,660 --> 00:31:33,809

in the media or in public but if

715

00:31:37,760 --> 00:31:35,670

somebody has bought one pill and they're

716

00:31:39,650 --> 00:31:37,770

planning on buying 20 more from from

717

00:31:41,840 --> 00:31:39,660

their dealer and they find out that it's

718

00:31:43,760 --> 00:31:41,850

poisonous then they can go back to the

719

00:31:46,400 --> 00:31:43,770

dealer and say hey you've sold me a

720

00:31:49,460 --> 00:31:46,410

really dodgy pill yeah and so there's

721

00:31:52,370 --> 00:31:49,470

actually like this weird subversive

722

00:31:54,350 --> 00:31:52,380

quality control that's that's brought it

723

00:31:57,020 --> 00:31:54,360

into the system and we don't really

724

00:31:59,419 --> 00:31:57,030

mention this all that much but actually

725

00:32:01,460 --> 00:31:59,429

like what they've found in markets

726

00:32:04,010 --> 00:32:01,470

around the world is that people like

727

00:32:06,169 --> 00:32:04,020

start to produce more MDMA which is what

728

00:32:09,380 --> 00:32:06,179

people are after and less of the the

729

00:32:11,270 --> 00:32:09,390

more poisonous toxic chemicals that can

730

00:32:12,980 --> 00:32:11,280

be out there so it's a self-regulating

731

00:32:14,660 --> 00:32:12,990

market happening right underneath

732

00:32:16,220 --> 00:32:14,670

people's eyes without them even knowing

733

00:32:18,620 --> 00:32:16,230

it yeah well at the moment it's

734

00:32:20,450 --> 00:32:18,630

unregulated there's no tax on it people

735

00:32:22,610 --> 00:32:20,460

can do whatever they want and there's no

736

00:32:25,010 --> 00:32:22,620

repercussions so if somebody's actually

737

00:32:26,690 --> 00:32:25,020

told this is this is terrible

738

00:32:28,940 --> 00:32:26,700

this is not what you're meant to be

739

00:32:30,770 --> 00:32:28,950

selling then yeah like there's there's

740

00:32:34,299 --> 00:32:30,780

some ability to go back down the line

741

00:32:37,130 --> 00:32:34,309

and yeah help to have less poisonous

742

00:32:39,080 --> 00:32:37,140

toxic pills out there may be more

743

00:32:40,490 --> 00:32:39,090

suitable doses rather than really high

744

00:32:42,320 --> 00:32:40,500

doses which is what we were seeing in

745

00:32:43,580 --> 00:32:42,330

Australia at the moment which yeah and

746

00:32:45,980 --> 00:32:43,590

the thing is as well I guess what this

747

00:32:47,750 --> 00:32:45,990

enables and the organizers of music

748

00:32:49,400 --> 00:32:47,760

festivals to do is to issue warnings if

749

00:32:50,960 --> 00:32:49,410

they get someone coming into them with a

750

00:32:52,250 --> 00:32:50,970

particular pill that's quite distinctive

751

00:32:54,380 --> 00:32:52,260

and they test it and discover it's

752

00:32:55,940 --> 00:32:54,390

something very dangerous they can put

753

00:32:57,799 --> 00:32:55,950

out an alert to everyone at the festival

754

00:33:00,020 --> 00:32:57,809

saying don't buy this this will kill you

755

00:33:02,780 --> 00:33:00,030

and if they've got drug testing pill

756

00:33:04,100 --> 00:33:02,790

testing on-site then the the festival

757

00:33:05,630 --> 00:33:04,110

goers are more likely to take that

758

00:33:07,190 --> 00:33:05,640

advice seriously rather than just

759

00:33:09,560 --> 00:33:07,200

assuming it's scare mongering yeah

760

00:33:11,810 --> 00:33:09,570

exactly so I've talked to people running

761

00:33:13,820 --> 00:33:11,820

festivals over in the UK and they know

762

00:33:15,950 --> 00:33:13,830

that there's some guy who is wearing a

763

00:33:17,840 --> 00:33:15,960

black jacket at the certain part of the

764

00:33:20,240 --> 00:33:17,850

festival and he's producing all of these

765

00:33:22,160 --> 00:33:20,250

like really toxic pill

766

00:33:23,420 --> 00:33:22,170

for everybody you can put up like

767

00:33:25,310 --> 00:33:23,430

billboards you can put it up on the

768

00:33:27,770 --> 00:33:25,320

screens you can put it out on social

769

00:33:29,150 --> 00:33:27,780

media saying these pills that look a

770

00:33:32,090 --> 00:33:29,160

little bit gray and they've got a

771

00:33:34,730 --> 00:33:32,100

picture of a shield on the front of them

772

00:33:36,800 --> 00:33:34,740

then this is not weird if I'm there they

773

00:33:38,960 --> 00:33:36,810

smell the vomit maybe there's something

774

00:33:42,230 --> 00:33:38,970

wrong with them and so you can actually

775

00:33:45,590 --> 00:33:42,240

target your your advertising campaign or

776

00:33:47,540 --> 00:33:45,600

your warning campaign to to that part of

777

00:33:48,830 --> 00:33:47,550

the festival and then hopefully that guy

778

00:33:52,010 --> 00:33:48,840

who's standing there in a black jacket

779

00:33:54,470 --> 00:33:52,020

in the rain is able to go oh ok bye oh

780

00:33:56,450 --> 00:33:54,480

my business is over yes let's let's drop

781

00:33:58,010 --> 00:33:56,460

this now and so we find that people

782

00:33:59,900 --> 00:33:58,020

actually wear this pill testing

783

00:34:03,050 --> 00:33:59,910

available that there's less drug use

784

00:34:05,150 --> 00:34:03,060

because people are taking less toxic

785

00:34:07,460 --> 00:34:05,160

substances and yeah they're actually

786

00:34:09,770 --> 00:34:07,470

modifying their use and decreasing the

787

00:34:12,560 --> 00:34:09,780

amount that they're having it was there

788

00:34:14,840 --> 00:34:12,570

and this is the other part of it every

789

00:34:16,820 --> 00:34:14,850

every delivery of information if you're

790

00:34:18,260 --> 00:34:16,830

having pill testing done it's done by a

791

00:34:19,610 --> 00:34:18,270

health professional who knows what

792

00:34:22,250 --> 00:34:19,620

they're talking about and so we actually

793

00:34:24,440 --> 00:34:22,260

go through people's past history we talk

794

00:34:25,700 --> 00:34:24,450

about whether they've got epilepsy if

795

00:34:27,050 --> 00:34:25,710

they're on the medication what

796

00:34:29,330 --> 00:34:27,060

mitigation they're on are they on

797

00:34:30,889 --> 00:34:29,340

antidepressants that could make them

798

00:34:33,500 --> 00:34:30,899

more likely to have a serotonergic

799

00:34:36,200 --> 00:34:33,510

reaction and overheat and die from

800

00:34:37,940 --> 00:34:36,210

having something like ecstasy so it's

801

00:34:39,590 --> 00:34:37,950

it's a way of delivering that

802

00:34:42,860 --> 00:34:39,600

information that's tailored to that

803

00:34:44,270 --> 00:34:42,870

person and also we find that about 95

804

00:34:46,159 --> 00:34:44,280

percent of people who have that

805

00:34:47,270 --> 00:34:46,169

consultation that's the first time

806

00:34:49,070 --> 00:34:47,280

they've talked with a health

807

00:34:50,990 --> 00:34:49,080

professional about their drug use at all

808

00:34:52,639 --> 00:34:51,000

yeah so most people who don't sort of go

809

00:34:55,250 --> 00:34:52,649

to their family GP and say hey I'm

810

00:34:58,010 --> 00:34:55,260

taking pills on the weekend it's not

811

00:35:01,400 --> 00:34:58,020

often something that I see even as a GP

812

00:35:04,670 --> 00:35:01,410

working in Darlinghurst and Sydney but

813

00:35:06,680 --> 00:35:04,680

yeah it's targeting those those

814

00:35:08,080 --> 00:35:06,690

conversations and enabling people to

815

00:35:10,520 --> 00:35:08,090

have an open and honest conversation

816

00:35:11,660 --> 00:35:10,530

about their drug use swimmy yeah

817

00:35:14,210 --> 00:35:11,670

otherwise they're getting information

818

00:35:17,150 --> 00:35:14,220

from online or from from Jack

819

00:35:19,430 --> 00:35:17,160

who's in here 7 yes well and that's the

820

00:35:22,100 --> 00:35:19,440

thing is it's hard to see a downside to

821

00:35:23,630 --> 00:35:22,110

providing education right it's if you

822

00:35:25,880 --> 00:35:23,640

want to educate the public and have them

823

00:35:27,710 --> 00:35:25,890

make an educated risk they get to take

824

00:35:30,110 --> 00:35:27,720

that risk anyway let's give them

825

00:35:32,510 --> 00:35:30,120

something to actually become skeptics

826

00:35:35,910 --> 00:35:32,520

perhaps even drug skeptics

827

00:35:37,560 --> 00:35:35,920

more knowledge is more power absolutely

828

00:35:45,390 --> 00:35:37,570

well on that night thank you very much

829

00:35:45,400 --> 00:35:53,670

[Music]

830

00:35:53,680 --> 00:36:00,620

[Applause]

831

00:36:05,810 --> 00:36:05,150

i Richard Oh hi Trish hi would you like

832

00:36:07,250 --> 00:36:05,820

a coffee

833

00:36:09,530 --> 00:36:07,260

yeah thanks what are you working on I'm

834

00:36:11,830 --> 00:36:09,540

trying to come up with a new promo to

835

00:36:15,290 --> 00:36:11,840

play on the sceptic zone who's it for

836

00:36:17,810 --> 00:36:15,300

good thinking society in the UK you know

837

00:36:19,430 --> 00:36:17,820

the oh yeah I know them the guys who

838

00:36:21,560 --> 00:36:19,440

recently chased the homeopaths out of

839

00:36:23,480 --> 00:36:21,570

the UK public health system oh did they

840

00:36:24,680 --> 00:36:23,490

yeah they campaigned and lobbied

841

00:36:27,830 --> 00:36:24,690

government for a while and now you

842

00:36:29,150 --> 00:36:27,840

cannot get homeopathy on the NHS so they

843

00:36:31,160 --> 00:36:29,160

can now spend public money on health

844

00:36:33,530 --> 00:36:31,170

care that works Yeah right look I'll

845

00:36:38,090 --> 00:36:33,540

mention that in the promo now their

846

00:36:39,950 --> 00:36:38,100

website is good thinking society org and

847

00:36:42,410 --> 00:36:39,960

that website is a good resource for

848

00:36:43,910 --> 00:36:42,420

learning more about quackery thanks

849

00:36:51,510 --> 00:36:43,920

Trish that gives me something good to

850

00:36:58,080 --> 00:36:55,080

the California Academy of Sciences is a

851
00:37:01,920 --> 00:36:58,090
Research Institute and Natural History

852
00:37:04,470 --> 00:37:01,930
Museum in San Francisco California it is

853
00:37:07,620 --> 00:37:04,480
among the largest museums of Natural

854
00:37:11,540 --> 00:37:07,630
History in the world housing over 26

855
00:37:15,390 --> 00:37:11,550
million specimens the Academy began in

856
00:37:17,670 --> 00:37:15,400
1853 as a learner society and still

857
00:37:21,180 --> 00:37:17,680
carries out a large amount of original

858
00:37:31,440 --> 00:37:21,190
research it's California's oldest Museum

859
00:37:34,130 --> 00:37:31,450
and located in Golden Gate Park the

860
00:37:38,250 --> 00:37:34,140
Academy of Sciences I'm in the foyer and

861
00:37:40,830 --> 00:37:38,260
one of the first things to greet us and

862
00:37:46,200 --> 00:37:40,840
all these excited children is the

863
00:37:48,180 --> 00:37:46,210

classic t-rex dinosaur skeleton and I'd

864

00:37:52,530 --> 00:37:48,190

love to see these things occasionally it

865

00:37:56,990 --> 00:37:52,540

reminds me how wonderful fantastic and

866

00:37:59,540 --> 00:37:57,000

amazing dinosaurs were and our

867

00:38:02,030 --> 00:37:59,550

and this question is particularly final

868

00:38:04,910 --> 00:38:02,040

it's it looks wonderful as well

869

00:38:08,260 --> 00:38:04,920

presented it looks fierce and it's a

870

00:38:11,120 --> 00:38:08,270

great attraction for kids of all ages

871

00:38:15,670 --> 00:38:11,130

the classic t-rex of course if we look

872

00:38:19,730 --> 00:38:15,680

at the forearms that only has two

873

00:38:24,680 --> 00:38:19,740

fingers or claws and we look at the

874

00:38:28,400 --> 00:38:24,690

giant feet chicken's feet birds feet it

875

00:38:31,880 --> 00:38:28,410

is so clear when you look at the

876
00:38:33,500 --> 00:38:31,890
theropod dinosaur you study the feet and

877
00:38:35,630 --> 00:38:33,510
you think of a Turkey's foot or a

878
00:38:39,779 --> 00:38:35,640
chicken's foot north Negus foot

879
00:38:39,789 --> 00:38:45,770
let's explore the Academy

880
00:38:50,060 --> 00:38:48,230
and I've come across a wonderful display

881
00:38:54,470 --> 00:38:50,070
here it's like a Barrier Reef like a

882
00:38:57,440 --> 00:38:54,480
coral reef I can look down and see no

883
00:38:59,400 --> 00:38:57,450
end of tropical fish and stingrays from

884
00:39:03,900 --> 00:38:59,410
the buff

885
00:39:08,359 --> 00:39:03,910
again it's enchanting to everybody

886
00:39:16,270 --> 00:39:08,369
let's have a look oh it's just beautiful

887
00:39:16,280 --> 00:39:24,010
the kids just love it and me too

888
00:39:29,560 --> 00:39:26,650

good to see so many kids here today I

889

00:39:33,430 --> 00:39:29,570

guess there are many school groups which

890

00:39:34,750 --> 00:39:33,440

is fine although I myself sometimes

891

00:39:36,880 --> 00:39:34,760

because the school kids here in

892

00:39:39,910 --> 00:39:36,890

California don't have a uniform by and

893

00:39:42,010 --> 00:39:39,920

large whereas back home in Australia if

894

00:39:43,720 --> 00:39:42,020

I was at a museum there was a school

895

00:39:47,050 --> 00:39:43,730

group that they'd all be marching around

896

00:39:51,820 --> 00:39:47,060

in their uniform and here we have a

897

00:39:56,280 --> 00:39:51,830

classic display which is a giant

898

00:40:00,339 --> 00:39:56,290

pendulum all the way to the ceiling on

899

00:40:03,940 --> 00:40:00,349

unwire and it's demonstrating the world

900

00:40:09,550 --> 00:40:03,950

is rotating so the pendulum is swinging

901
00:40:12,250 --> 00:40:09,560
back and forth in the same sweep it

902
00:40:15,400 --> 00:40:12,260
doesn't move in that respect but the

903
00:40:18,359 --> 00:40:15,410
earth is moving beneath it and as the

904
00:40:23,950 --> 00:40:18,369
Earth rotates the pendulum knocks over

905
00:40:27,730 --> 00:40:23,960
various little metal poles

906
00:40:29,470 --> 00:40:27,740
it's quite mesmerizing to watch and it's

907
00:40:34,760 --> 00:40:29,480
a classic experiment the show the world

908
00:40:41,840 --> 00:40:37,120
and here's an interesting one one of the

909
00:40:47,000 --> 00:40:41,850
workers here has a alligator or

910
00:40:51,080 --> 00:40:49,760
you die it's true all right so you guys

911
00:40:56,830 --> 00:40:51,090
can sort of see how that would work

912
00:41:00,610 --> 00:40:58,960
and I was just about to say it's like

913
00:41:03,910 --> 00:41:00,620

feeling leather which of course it is

914

00:41:07,240 --> 00:41:03,920

it's feeling leather now I'm in an

915

00:41:11,020 --> 00:41:07,250

elevator a lift and elevator going down

916

00:41:14,290 --> 00:41:11,030

to the aquarium level it says I saw some

917

00:41:20,880 --> 00:41:14,300

of the tropical fish from above so let's

918

00:41:27,100 --> 00:41:20,890

see where this opens up to anticipation

919

00:41:30,350 --> 00:41:27,110

hello I'm still good now I'm safe here

920

00:41:35,759 --> 00:41:32,859

my word

921

00:41:39,880 --> 00:41:35,769

so this is what I was looking down upon

922

00:41:43,730 --> 00:41:39,890

it is a giant aquarium here I'm looking

923

00:41:53,580 --> 00:41:48,360

what a wonderful display how thick

924

00:41:56,770 --> 00:41:53,590

mustace glass or perspex be it's a

925

00:42:03,079 --> 00:41:59,620

with hundreds of people here absolutely

926
00:42:12,349 --> 00:42:07,710
now I find myself the exact opposite of

927
00:42:18,120 --> 00:42:12,359
before I'm now under the fish looking up

928
00:42:27,860 --> 00:42:22,569
what the hell is that these giant fish

929
00:42:34,330 --> 00:42:30,050
around another corner and what a

930
00:42:37,420 --> 00:42:34,340
spectacular sight this is the biggest

931
00:42:41,710 --> 00:42:37,430
the biggest glass face I've seen here so

932
00:42:44,080 --> 00:42:41,720
far it's about oh I don't know

933
00:42:47,980 --> 00:42:44,090
all metres tall something like that

934
00:42:54,849 --> 00:42:52,020
get right up to the front of it now oh

935
00:42:56,810 --> 00:42:54,859
yeah that's tall it's probably about 15

936
00:42:59,770 --> 00:42:56,820
feet tall

937
00:43:02,570 --> 00:42:59,780
or multi-lingual here when it comes to

938
00:43:04,940 --> 00:43:02,580

measurements but it is looking directly

939

00:43:07,610 --> 00:43:04,950

into the coral reefs Oasis fantastic

940

00:43:10,370 --> 00:43:07,620

hundreds of fish unders of tropical fish

941

00:43:15,320 --> 00:43:10,380

I can keep walking around it's quite

942

00:43:17,480 --> 00:43:15,330

disorienting so much like it's moving

943

00:43:20,360 --> 00:43:17,490

and you can probably hear the weird sort

944

00:43:24,950 --> 00:43:20,370

of acoustic effect this curved surface

945

00:43:28,430 --> 00:43:24,960

is making step back a little bit and

946

00:43:32,930 --> 00:43:28,440

enjoy the whole scene and it says

947

00:43:37,410 --> 00:43:35,490

coming back up a level or two I'm now

948

00:43:41,010 --> 00:43:37,420

looking down upon the enclosure of an

949

00:43:42,819 --> 00:43:41,020

albino crocodile or alligator let me

950

00:43:46,120 --> 00:43:42,829

have a look

951
00:43:49,239 --> 00:43:46,130
and the little information sign says you

952
00:43:52,089 --> 00:43:49,249
can tell if this is an albino alligator

953
00:43:54,370 --> 00:43:52,099
by looking at its eyes true albinos have

954
00:43:58,089 --> 00:43:54,380
pink eyes and like the body pigment

955
00:44:01,209 --> 00:43:58,099
melanin in lush green swamps and bright

956
00:44:03,339 --> 00:44:01,219
and then white stands out white

957
00:44:05,829 --> 00:44:03,349
alligator born in the wild would have a

958
00:44:10,599 --> 00:44:05,839
low chance of surviving to adulthood and

959
00:44:13,599 --> 00:44:10,609
yet here one is and look down upon it it

960
00:44:15,640 --> 00:44:13,609
looks like it's a Hollywood prop it's

961
00:44:17,679 --> 00:44:15,650
only when you closely look at its eyes

962
00:44:20,769 --> 00:44:17,689
which move occasionally can you tell

963
00:44:25,719 --> 00:44:20,779

that it's a real alligator absolutely

964

00:44:28,809 --> 00:44:25,729

beautiful I really cannot underestimate

965

00:44:30,880 --> 00:44:28,819

the importance of institutions like the

966

00:44:33,699 --> 00:44:30,890

California Academy of Sciences or the

967

00:44:35,439 --> 00:44:33,709

Australian Museum in Sydney and their

968

00:44:39,849 --> 00:44:35,449

sister organizations all around the

969

00:44:42,519 --> 00:44:39,859

world especially and I note again this

970

00:44:44,910 --> 00:44:42,529

place is full of suit students school

971

00:44:48,880 --> 00:44:44,920

students

972

00:44:52,310 --> 00:44:48,890

Wow and here's something

973

00:44:55,250 --> 00:44:52,320

notable on in both directions to my left

974

00:44:58,580 --> 00:44:55,260

them to my right to my left there is a

975

00:45:01,850 --> 00:44:58,590

open lab will aleb with scientists

976
00:45:06,110 --> 00:45:01,860
working you can observe them through a

977
00:45:08,750 --> 00:45:06,120
glass window large glass window and on

978
00:45:11,090 --> 00:45:08,760
the other side we have

979
00:45:15,290 --> 00:45:11,100
goodness me what is this it's a giant

980
00:45:17,560 --> 00:45:15,300
dome like some sort of weird experiment

981
00:45:19,550 --> 00:45:17,570
that you see in science-fiction movies

982
00:45:21,590 --> 00:45:19,560
it's enormous

983
00:45:24,790 --> 00:45:21,600
completely transparent with the spiral

984
00:45:31,600 --> 00:45:27,520
and it looks like a tropical forest

985
00:45:35,560 --> 00:45:31,610
complete with lagoon and fish I guess

986
00:45:39,610 --> 00:45:35,570
it's worth a look and in order to get

987
00:45:42,309 --> 00:45:39,620
there I'm passing the skeleton of I

988
00:45:45,159 --> 00:45:42,319

guess it's a blue whale

989

00:45:47,679 --> 00:45:45,169

you can't quite see the information

990

00:45:50,109 --> 00:45:47,689

about it that's the biggest skeleton

991

00:45:52,299 --> 00:45:50,119

I've ever seen much like the skeleton

992

00:45:54,600 --> 00:45:52,309

hanging from the ceiling of the

993

00:45:57,930 --> 00:45:54,610

Australian Museum in Sydney

994

00:45:59,690 --> 00:45:57,940

oh I see I'm passing the section to do

995

00:46:02,940 --> 00:45:59,700

with evolution well that's a good sign

996

00:46:07,770 --> 00:46:02,950

and I guess I'd better join this long

997

00:46:09,350 --> 00:46:07,780

line to get into this incredible looking

998

00:46:12,960 --> 00:46:09,360

dome

999

00:46:14,760 --> 00:46:12,970

we are hundreds of people and with

1000

00:46:18,480 --> 00:46:14,770

hundreds of people we are in a huge

1001
00:46:20,610 --> 00:46:18,490
glass dome it butterflies flying about

1002
00:46:23,460 --> 00:46:20,620
and displays and giving animals and

1003
00:46:25,980 --> 00:46:23,470
little I've lost cases tropical plants

1004
00:46:28,620 --> 00:46:25,990
everywhere but the people outside in the

1005
00:46:32,340 --> 00:46:28,630
rest of the facility are looking in on

1006
00:46:36,359 --> 00:46:32,350
us so maybe in a weird way we're part of

1007
00:46:42,030 --> 00:46:38,970
lots of little things to do and explore

1008
00:46:45,990 --> 00:46:42,040
and breathe along the way a couple of

1009
00:46:51,880 --> 00:46:46,000
beautiful merits here just about a me

1010
00:46:55,190 --> 00:46:51,890
defense beautiful macaws

1011
00:47:01,730 --> 00:46:55,200
brilliant blue color blue and yellow a

1012
00:47:03,500 --> 00:47:01,740
orange in the higher I get the warmer it

1013
00:47:07,250 --> 00:47:03,510

seems to be or maybe that's because I'm

1014

00:47:10,880 --> 00:47:07,260

exerting myself to walk up this this

1015

00:47:13,730 --> 00:47:10,890

long ramp and the higher we get the more

1016

00:47:16,040 --> 00:47:13,740

butterflies there are that's interesting

1017

00:47:18,680 --> 00:47:16,050

my guests are all flying to the top and

1018

00:47:23,690 --> 00:47:18,690

I can see way about me there are

1019

00:47:26,390 --> 00:47:23,700

butterfly feeding stations almost the

1020

00:47:31,220 --> 00:47:26,400

very top level and again another

1021

00:47:31,230 --> 00:47:41,300

in the trees as a coach the butterflies

1022

00:47:48,319 --> 00:47:44,700

I can't describe it adequately insist

1023

00:47:59,760 --> 00:47:48,329

it's mythical by walking in a in a

1024

00:48:05,500 --> 00:48:02,650

another elevator and a set of stairs

1025

00:48:08,260 --> 00:48:05,510

brings us to the very roof of the

1026
00:48:14,900 --> 00:48:08,270
Academy of Sciences which is called the

1027
00:48:22,020 --> 00:48:17,140
aha

1028
00:48:27,460 --> 00:48:24,270
whoa

1029
00:48:27,470 --> 00:48:31,790
representation of a real setting

1030
00:48:41,380 --> 00:48:35,560
and inviting habitat for birds it says

1031
00:48:45,900 --> 00:48:41,390
with funny domes and rolling hills

1032
00:48:48,400 --> 00:48:45,910
covered with grass and small vegetation

1033
00:48:50,140 --> 00:48:48,410
and it's a wonderful day he were on the

1034
00:48:51,249 --> 00:48:50,150
roof of the Academy of Sciences and

1035
00:48:53,769 --> 00:48:51,259
hello who you

1036
00:48:58,089 --> 00:48:53,779
I am shahara whanaketanga and you're one

1037
00:48:59,859 --> 00:48:58,099
of the volunteers docent volunteer here

1038
00:49:01,449 --> 00:48:59,869

and your job is to explain to people

1039

00:49:04,660 --> 00:49:01,459

which you were just explaining to mean

1040

00:49:06,249 --> 00:49:04,670

some other people how the roof works and

1041

00:49:08,529 --> 00:49:06,259

and you've got a little model here and

1042

00:49:11,979 --> 00:49:08,539

you've got the layers of the roof and

1043

00:49:13,359 --> 00:49:11,989

you're saying that some design had

1044

00:49:14,890 --> 00:49:13,369

turned up with a sketch pad and just

1045

00:49:16,120 --> 00:49:14,900

said here's what the roof should look

1046

00:49:20,529 --> 00:49:16,130

like would complete with rolling hills

1047

00:49:24,370 --> 00:49:20,539

yeah yeah the architect for this

1048

00:49:25,989 --> 00:49:24,380

building had it just came in and had

1049

00:49:29,650 --> 00:49:25,999

this vision in his head he was walking

1050

00:49:30,910 --> 00:49:29,660

his daughter this is true legends he was

1051
00:49:33,099 --> 00:49:30,920
walking his daughter around San

1052
00:49:35,650 --> 00:49:33,109
Francisco and noticed the hills and how

1053
00:49:38,499 --> 00:49:35,660
beautiful it was and then he just had

1054
00:49:42,160 --> 00:49:38,509
this thought that he wanted to preserve

1055
00:49:44,739 --> 00:49:42,170
the park within the building you know

1056
00:49:46,449 --> 00:49:44,749
and so he decided that that's how he was

1057
00:49:49,359 --> 00:49:46,459
gonna he was gonna raise the roof and

1058
00:49:51,609 --> 00:49:49,369
let the park be on top of it and it

1059
00:49:53,559 --> 00:49:51,619
worked I think you'll agree it really

1060
00:49:55,539 --> 00:49:53,569
worked so you're up here on the roof

1061
00:49:58,509 --> 00:49:55,549
today explaining to people how the roof

1062
00:50:00,099 --> 00:49:58,519
works you find yourself in other areas

1063
00:50:04,449 --> 00:50:00,109

of the the building to explain other

1064

00:50:06,910 --> 00:50:04,459

things yes I work in the flooded Amazon

1065

00:50:09,579 --> 00:50:06,920

rainforest oh yes you I work at the

1066

00:50:11,799 --> 00:50:09,589

titles and in the rainforest fantastic

1067

00:50:13,959 --> 00:50:11,809

and I guess it's a sort of job that you

1068

00:50:16,749 --> 00:50:13,969

just really have a heart and a passion

1069

00:50:19,510 --> 00:50:16,759

for definitely thank you very much thank

1070

00:50:24,970 --> 00:50:21,910

I'm now making my way to the planetarium

1071

00:50:28,000 --> 00:50:24,980

for the 12:30 showing of our journey to

1072

00:50:30,580 --> 00:50:28,010

the Stars I think it is but on my way

1073

00:50:33,910 --> 00:50:30,590

I'm stopping by the African gallery

1074

00:50:37,350 --> 00:50:33,920

human Odyssey it says which has displays

1075

00:50:43,420 --> 00:50:37,360

on Africa and evolution of primates and

1076

00:50:51,079 --> 00:50:46,640

display of living penguins look at them

1077

00:50:53,020 --> 00:50:51,089

aren't they sweet and we can see below

1078

00:50:59,950 --> 00:50:53,030

the water and above the water

1079

00:51:03,560 --> 00:50:59,960

maybe Heine giant glass giant glass

1080

00:51:06,310 --> 00:51:03,570

panel and they're just hanging out on

1081

00:51:15,560 --> 00:51:06,320

their rocks these penguins are just

1082

00:51:19,780 --> 00:51:17,330

well that was very enjoyable in the

1083

00:51:22,130 --> 00:51:19,790

planetarium journey to the Stars a

1084

00:51:24,950 --> 00:51:22,140

visualization of the galaxy and the life

1085

00:51:27,230 --> 00:51:24,960

of stars well I'm back at the dinosaur

1086

00:51:30,800 --> 00:51:27,240

again the t-rex which means it's time to

1087

00:51:33,860 --> 00:51:30,810

go maybe a quick trip to the gift shop

1088

00:51:36,650 --> 00:51:33,870

on my way out but what a wonderful thing

1089

00:51:45,560 --> 00:51:36,660

it is to do to visit the California

1090

00:51:47,330 --> 00:51:45,570

Academy of Sciences if you're planning a

1091

00:51:49,930 --> 00:51:47,340

visit to the California Academy of

1092

00:51:53,630 --> 00:51:49,940

Sciences check out their website at Cal

1093

00:51:57,020 --> 00:51:53,640

Academy org and the general opening

1094

00:52:00,900 --> 00:51:57,030

hours are Monday to Saturday 9 a.m. to 5

1095

00:52:19,470 --> 00:52:00,910

p.m. or on Sunday 11 a.m. to 5 p.m.

1096

00:52:24,040 --> 00:52:21,700

thank you for listening to the skeptic

1097

00:52:27,510 --> 00:52:24,050

zone and thank you again to those people

1098

00:52:30,670 --> 00:52:27,520

who contribute and via patreon a PayPal

1099

00:52:32,230 --> 00:52:30,680

and if it wasn't for your generous

1100

00:52:34,630 --> 00:52:32,240

support there would be no skeptic

1101
00:52:38,020 --> 00:52:34,640
certain of course and if you've ever

1102
00:52:40,390 --> 00:52:38,030
considered chipping and helping to

1103
00:52:46,740 --> 00:52:40,400
support the skeptic zone well why not

1104
00:52:50,800 --> 00:52:46,750
try it for \$5.00 a month via patreon and

1105
00:52:53,170 --> 00:52:50,810
do that for the rest of 2019 if only a

1106
00:52:57,400 --> 00:52:53,180
tiny percentage of the listenership did

1107
00:53:01,390 --> 00:52:57,410
that it would really help the show stay

1108
00:53:04,210 --> 00:53:01,400
online as it stands at the moment it it

1109
00:53:06,520 --> 00:53:04,220
scrapes through every week every month

1110
00:53:09,850 --> 00:53:06,530
it sort of just scraped through with a

1111
00:53:12,430 --> 00:53:09,860
lot of kind support from especially my

1112
00:53:15,190 --> 00:53:12,440
reporters and a lot of free work being

1113
00:53:17,680 --> 00:53:15,200

done I have to be candid so if you've

1114

00:53:20,410 --> 00:53:17,690

ever considered it it would be really

1115

00:53:21,820 --> 00:53:20,420

great if you could do so and maybe also

1116

00:53:24,850 --> 00:53:21,830

at the same time you can consider

1117

00:53:29,110 --> 00:53:24,860

supporting Maynard at Maynard comdev a

1118

00:53:30,520 --> 00:53:29,120

you with his podcast because he is works

1119

00:53:34,450 --> 00:53:30,530

very hard to bring you fabulous

1120

00:53:36,040 --> 00:53:34,460

entertainment and comedy looking forward

1121

00:53:40,030 --> 00:53:36,050

to seeing may not soon I hope to be back

1122

00:53:41,710 --> 00:53:40,040

in Australia in about a week although I

1123

00:53:45,160 --> 00:53:41,720

understand with the heat over there

1124

00:53:47,970 --> 00:53:45,170

maybe it's better to be in California or

1125

00:53:55,240 --> 00:53:53,560

but for this week very very excited

1126
00:53:56,590 --> 00:53:55,250
schoolchildren just having visited the

1127
00:54:01,530 --> 00:53:56,600
Academy of Sciences

1128
00:54:08,800 --> 00:54:04,630
sort of trying to this is Richard

1129
00:54:16,510 --> 00:54:08,810
Saunders signing off from San Francisco

1130
00:54:19,210 --> 00:54:16,520
California you've been listening to the

1131
00:54:25,900 --> 00:54:19,220
skeptic zone podcast please visit our

1132
00:54:28,690 --> 00:54:25,910
website at wwlp.com tax and to access

1133
00:54:32,290 --> 00:54:28,700
the back catalog of episodes going back

1134
00:54:35,950 --> 00:54:32,300
to 2008 you can follow the skeptic zone

1135
00:54:38,350 --> 00:54:35,960
podcast on twitter at skeptic zone visit

1136
00:54:39,240 --> 00:54:38,360
our facebook page or leave a review on

1137
00:54:41,920 --> 00:54:39,250
itunes

1138
00:54:45,280 --> 00:54:41,930

you can also support the skeptic zone

1139

00:54:48,000 --> 00:54:45,290

via patreon or PayPal the skeptic zone

1140

00:54:50,410 --> 00:54:48,010

podcast is an independent production

1141

00:54:52,510 --> 00:54:50,420

reviews and opinions expressed on the

1142

00:54:54,880 --> 00:54:52,520

skeptic zone are not necessarily those

1143

00:54:56,670 --> 00:54:54,890

of Australian skeptics or any other