

**THE  
SKEPTIC  
ZONE  
PODCAST**

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

1  
00:00:09,080 --> 00:00:05,920

[Music]

2  
00:00:11,830 --> 00:00:09,090

welcome to the skeptic zone the podcast

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

from Australia for science and reason

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

[Music]

5  
00:00:21,940 --> 00:00:16,850

[Applause]

6  
00:00:24,530 --> 00:00:21,950

[Music]

7  
00:00:28,010 --> 00:00:24,540

hello and welcome to the skeptic zone

8  
00:00:31,460 --> 00:00:28,020

episode number 437 for the fifth of

9  
00:00:35,000 --> 00:00:31,470

March 2017 Richard Saunders here with

10  
00:00:36,950 --> 00:00:35,010

you from rain-soaked Sydney Australia in

11  
00:00:39,170 --> 00:00:36,960

fact we've had quite a lot of rainfall

12  
00:00:41,210 --> 00:00:39,180

lately the Ducks are happy as my

13  
00:00:43,490 --> 00:00:41,220

grandfather used to say it's good

14

00:00:48,350 --> 00:00:43,500

weather for ducks and speaking of things

15

00:00:51,560 --> 00:00:48,360

that go quack hmm news this week of our

16

00:00:53,240 --> 00:00:51,570

david wolfe david avocado Wolfe as he's

17

00:00:55,790 --> 00:00:53,250

known we're going to catch up with our

18

00:00:57,680 --> 00:00:55,800

friend and reporter Heidi Robertson the

19

00:01:00,110 --> 00:00:57,690

raw skeptic in the raw skeptic report

20

00:01:02,930 --> 00:01:00,120

who is going to fill us in on the latest

21

00:01:05,930 --> 00:01:02,940

information about his Australian tour

22

00:01:08,330 --> 00:01:05,940

and plus some news items from Jane

23

00:01:10,910 --> 00:01:08,340

Hansen who we often quote on the skeptic

24

00:01:12,770 --> 00:01:10,920

zone that's coming up at the top of the

25

00:01:14,750 --> 00:01:12,780

show after that we're going to be

26

00:01:16,490 --> 00:01:14,760

looking at the story as written at

27

00:01:18,950 --> 00:01:16,500

skeptics comdata you the Australian

28

00:01:20,900 --> 00:01:18,960

skeptics website about our friends in

29

00:01:23,150 --> 00:01:20,910

Victoria at the Victorian skeptics

30

00:01:24,680 --> 00:01:23,160

tumbling rumbling discovering some

31

00:01:27,470 --> 00:01:24,690

dangerous products or potentially

32

00:01:32,600 --> 00:01:27,480

dangerous products being sold in a

33

00:01:36,560 --> 00:01:32,610

Melbourne Hospital and homeopathy rears

34

00:01:38,840 --> 00:01:36,570

its ridiculous head once more also this

35

00:01:42,500 --> 00:01:38,850

week we have brouhaha from Australia

36

00:01:46,370 --> 00:01:42,510

science TV and it's kelly wang telling

37

00:01:48,650 --> 00:01:46,380

us about science and the Academy Awards

38

00:01:50,510 --> 00:01:48,660

the Oscars then to round off the show a

39

00:01:54,470 --> 00:01:50,520

special report with some scientists this

40

00:01:56,660 --> 00:01:54,480

is where the haha the theme of the show

41

00:02:00,100 --> 00:01:56,670

the skeptics own science and reason this

42

00:02:02,420 --> 00:02:00,110

is the science part restore and renew

43

00:02:05,720 --> 00:02:02,430

main odds going to be chatting to some

44

00:02:07,990 --> 00:02:05,730

scientists here in Sydney about gene

45

00:02:11,500 --> 00:02:08,000

technology when it comes to botany a

46

00:02:15,759 --> 00:02:11,510

really interesting series of interviews

47

00:02:19,130 --> 00:02:15,769

from Maynard gene technology and botany

48

00:02:20,720 --> 00:02:19,140

the genetics of plants and don't forget

49

00:02:23,720 --> 00:02:20,730

to check out Maynard's website at

50

00:02:26,449 --> 00:02:23,730

maynard com delay you for his podcasts

51  
00:02:28,729 --> 00:02:26,459  
and events now in the past couple of

52  
00:02:29,690 --> 00:02:28,739  
weeks I've started a new radio segment

53  
00:02:32,780 --> 00:02:29,700  
here in Australia

54  
00:02:34,250 --> 00:02:32,790  
just about skeptical issues and I'll add

55  
00:02:36,410 --> 00:02:34,260  
a link to that in the show notes if

56  
00:02:38,600 --> 00:02:36,420  
you're living in Australia yeah the

57  
00:02:40,040 --> 00:02:38,610  
segment goes out on weekends early

58  
00:02:41,930 --> 00:02:40,050  
morning I don't think that's a

59  
00:02:44,479 --> 00:02:41,940  
particular time it sort of slaughtered

60  
00:02:46,910 --> 00:02:44,489  
into the schedule with an old friend of

61  
00:02:49,130 --> 00:02:46,920  
mine Mike Williams man currently he's

62  
00:02:53,210 --> 00:02:49,140  
based here in Sydney working out of 2gb

63  
00:02:56,750 --> 00:02:53,220

but the show is syndicated but if you go

64

00:02:58,910 --> 00:02:56,760

to the skeptic zone skeptics and TV the

65

00:03:00,710 --> 00:02:58,920

website there I will add a link in the

66

00:03:03,830 --> 00:03:00,720

show notes where you can listen to or

67

00:03:05,720 --> 00:03:03,840

download my radio segments the first

68

00:03:09,309 --> 00:03:05,730

week was about general skepticism and

69

00:03:11,900 --> 00:03:09,319

the one that's just gone out is about

70

00:03:14,000 --> 00:03:11,910

predicting the future can psychics

71

00:03:17,870 --> 00:03:14,010

predict the future longtime skeptic zone

72

00:03:20,259 --> 00:03:17,880

listeners will know that about once a

73

00:03:23,979 --> 00:03:20,269

year we mark the homework of Australia's

74

00:03:26,990 --> 00:03:23,989

greatest psychics and seers and see how

75

00:03:29,150 --> 00:03:27,000

their prediction stack up to reality a

76

00:03:31,720 --> 00:03:29,160

new project I'm undertaking with the

77

00:03:35,110 --> 00:03:31,730

Australian skeptics at the moment we're

78

00:03:38,390 --> 00:03:35,120

marking were colliding we have collated

79

00:03:40,550 --> 00:03:38,400

400 predictions over 12 years made by

80

00:03:42,910 --> 00:03:40,560

Australian psychics and we're going

81

00:03:46,759 --> 00:03:42,920

through to do a comprehensive

82

00:03:49,400 --> 00:03:46,769

investigation into their accuracy more

83

00:03:51,559 --> 00:03:49,410

news on that as there as we progress and

84

00:03:54,110 --> 00:03:51,569

if you're in the sydney area you might

85

00:03:56,479 --> 00:03:54,120

want to check out stranger things down

86

00:03:59,599 --> 00:03:56,489

under it's a Facebook group just go to

87

00:04:04,160 --> 00:03:59,609

facebook.com slash stranger things down

88

00:04:07,610 --> 00:04:04,170

under one word and I notice they have an

89

00:04:11,289 --> 00:04:07,620

event coming up on the first of April

90

00:04:14,809 --> 00:04:11,299

where they're off to spend a day with

91

00:04:17,599 --> 00:04:14,819

some UFO believers this will be the

92

00:04:20,930 --> 00:04:17,609

right Eastwood's leagues club and it

93

00:04:22,760 --> 00:04:20,940

goes from 1pm to 5pm so it should be a

94

00:04:24,650 --> 00:04:22,770

quite an interesting afternoon if you're

95

00:04:26,750 --> 00:04:24,660

interested in joining the stranger

96

00:04:29,029 --> 00:04:26,760

things down under group going along to

97

00:04:31,750 --> 00:04:29,039

these things then head for the website

98

00:04:34,909 --> 00:04:31,760

at facebook link in the show notes and

99

00:04:37,820 --> 00:04:34,919

finally if you head for the Facebook

100

00:04:41,380 --> 00:04:37,830

side of the skeptic zone link on the

101

00:04:42,760 --> 00:04:41,390

show notes I have put their a

102

00:04:47,800 --> 00:04:42,770

high-resolution down

103

00:04:49,930 --> 00:04:47,810

loadable printable picture of the P the

104

00:04:53,230 --> 00:04:49,940

flying pig i created for james randi the

105

00:04:56,589 --> 00:04:53,240

origami flying pig Pegasus and it's made

106

00:05:00,570 --> 00:04:56,599

out of a Mongolian banknote if you code

107

00:05:03,550 --> 00:05:00,580

here click the link download the I

108

00:05:06,070 --> 00:05:03,560

reserved photograph of Pegasus and if

109

00:05:08,830 --> 00:05:06,080

you want to whack it on the wall if you

110

00:05:12,580 --> 00:05:08,840

do that by the way why don't you post a

111

00:05:14,320 --> 00:05:12,590

picture of figgis's institute on our

112

00:05:16,360 --> 00:05:14,330

facebook page arm that would be

113

00:05:19,390 --> 00:05:16,370

fantastic that's enough for me at the

114

00:05:22,439 --> 00:05:19,400

moment I'm going to run downstairs go

115

00:05:25,980 --> 00:05:22,449

into the cupboard above the fridge

116

00:05:30,550 --> 00:05:25,990

behind the soda water get out some

117

00:05:33,279 --> 00:05:30,560

popcorn microwave popcorn pop some

118

00:05:35,379 --> 00:05:33,289

popcorn I think we all need a lot of pop

119

00:05:37,839 --> 00:05:35,389

on lately with the world events what's

120

00:05:56,890 --> 00:05:37,849

going on well I munch that popcorn I

121

00:06:04,430 --> 00:06:00,110

as published in The Daily Telegraph on

122

00:06:07,190 --> 00:06:04,440

februari the 26th by Jane Hansen david

123

00:06:11,410 --> 00:06:07,200

wolfe flat earther brings anti-vaxxers

124

00:06:14,150 --> 00:06:11,420

to australia renowned international

125

00:06:19,280 --> 00:06:14,160

wellness guru and anti-vaccination

126

00:06:21,200 --> 00:06:19,290

proponent david avocado Wolfe has raised

127

00:06:23,840 --> 00:06:21,210

the hackles of health experts and

128

00:06:26,690 --> 00:06:23,850

parents in the Byron Shire regarding his

129

00:06:29,870 --> 00:06:26,700

upcoming visit on March the 16th in

130

00:06:32,780 --> 00:06:29,880

byron bay critics say the event which

131

00:06:34,730 --> 00:06:32,790

promises wolf will give quote Byron Bay

132

00:06:37,550 --> 00:06:34,740

the latest download on how the world

133

00:06:39,500 --> 00:06:37,560

really works and quote will provide a

134

00:06:42,680 --> 00:06:39,510

platform to mislead parents on the issue

135

00:06:45,080 --> 00:06:42,690

of vaccination the shire is renowned for

136

00:06:47,420 --> 00:06:45,090

the lowest vaccination rates in the

137

00:06:50,360 --> 00:06:47,430

country only forty-six percent of

138

00:06:52,520 --> 00:06:50,370

five-year-olds in mulund mimbi and 61

139

00:06:54,350 --> 00:06:52,530

percent of Byron Bay children are fully

140

00:06:57,260 --> 00:06:54,360

vaccinated compared to the national

141

00:06:59,810 --> 00:06:57,270

average of ninety-two percent Alison

142

00:07:02,000 --> 00:06:59,820

Gaylord co-founder of the Northern

143

00:07:04,880 --> 00:07:02,010

Rivers vaccination supporters group

144

00:07:07,250 --> 00:07:04,890

based in mulund mimbi said the area was

145

00:07:09,440 --> 00:07:07,260

a magnet for conspiracy theories and

146

00:07:12,710 --> 00:07:09,450

anti-vaccination advocates who are

147

00:07:15,410 --> 00:07:12,720

embraced by a community that prides

148

00:07:18,800 --> 00:07:15,420

itself on being alternative if not

149

00:07:21,830 --> 00:07:18,810

misinformed quote he is a well-known and

150

00:07:24,560 --> 00:07:21,840

evac sir and among his inspirational

151  
00:07:26,630 --> 00:07:24,570  
memes thousands share on Facebook he

152  
00:07:29,270 --> 00:07:26,640  
also posts miss information about

153  
00:07:32,360 --> 00:07:29,280  
vaccination and people like wolford

154  
00:07:35,390 --> 00:07:32,370  
drawn to this area for that reason they

155  
00:07:38,870 --> 00:07:35,400  
find the echo chamber they need in quote

156  
00:07:41,600 --> 00:07:38,880  
ms Gaylord said two babies including

157  
00:07:45,320 --> 00:07:41,610  
Dana McCaffrey lost their lives to

158  
00:07:48,170 --> 00:07:45,330  
whooping cough during the 2009 2012

159  
00:07:51,140 --> 00:07:48,180  
epidemic in the region which researchers

160  
00:07:54,440 --> 00:07:51,150  
pinpointed as the epicenter due to the

161  
00:07:57,640 --> 00:07:54,450  
low vaccination rates in the area David

162  
00:08:00,580 --> 00:07:57,650  
Wolfe who refers to himself as quote the

163  
00:08:03,580 --> 00:08:00,590

rockstar and Indiana Jones of superfoods

164

00:08:06,879 --> 00:08:03,590

and longevity universe in quote and

165

00:08:10,029 --> 00:08:06,889

boasts quote the world's top CEOs

166

00:08:12,790 --> 00:08:10,039

ambassadors celebrities athletes artists

167

00:08:15,850 --> 00:08:12,800

and real superheroes of the planet mums

168

00:08:18,730 --> 00:08:15,860

all took to David for expert advice in

169

00:08:22,029 --> 00:08:18,740

health beauty herbalism and chocolate

170

00:08:24,219 --> 00:08:22,039

end quote he incorrectly states on his

171

00:08:26,409 --> 00:08:24,229

website that a quote growing body of

172

00:08:28,540 --> 00:08:26,419

evidence indicates that vaccines are not

173

00:08:30,610 --> 00:08:28,550

safe and that they can injure

174

00:08:33,339 --> 00:08:30,620

permanently maim or even kill you or a

175

00:08:35,740 --> 00:08:33,349

family member in quote there is no such

176

00:08:37,630 --> 00:08:35,750

body of evidence ms gala and the

177

00:08:40,540 --> 00:08:37,640

Northern Rivers of vaccination

178

00:08:43,089 --> 00:08:40,550

supporters has sent an open letter to

179

00:08:46,510 --> 00:08:43,099

the host of the upcoming seminar Jing

180

00:08:50,170 --> 00:08:46,520

organics requesting they not provide a

181

00:08:52,449 --> 00:08:50,180

venue for Miss information quote hosting

182

00:08:54,970 --> 00:08:52,459

anti-vaccination activists in this area

183

00:08:57,490 --> 00:08:54,980

does nothing to help accurately inform

184

00:09:00,040 --> 00:08:57,500

the community about vaccines but it does

185

00:09:02,260 --> 00:09:00,050

place them at risk by exposing them to

186

00:09:04,480 --> 00:09:02,270

falsehoods that could easily lead them

187

00:09:07,300 --> 00:09:04,490

to stop vaccinating themselves and their

188

00:09:10,510 --> 00:09:07,310

children we see this as a public health

189

00:09:13,000 --> 00:09:10,520

issue and ask you to support us in our

190

00:09:16,150 --> 00:09:13,010

efforts to prevent the spread of Miss

191

00:09:18,820 --> 00:09:16,160

information like that which mr. wolf has

192

00:09:21,370 --> 00:09:18,830

spoken about in the past and quote the

193

00:09:24,910 --> 00:09:21,380

letter reads local pediatrician dr.

194

00:09:27,579 --> 00:09:24,920

Chris Engel said hosting such people

195

00:09:31,150 --> 00:09:27,589

just creates further confusion and

196

00:09:33,400 --> 00:09:31,160

misleads people quote we see a high

197

00:09:36,579 --> 00:09:33,410

prevalence of vaccine preventable

198

00:09:39,280 --> 00:09:36,589

illnesses here that takes a real toll on

199

00:09:42,160 --> 00:09:39,290

children and parents these people like

200

00:09:45,370 --> 00:09:42,170

wolf land up here with all the

201  
00:09:47,800 --> 00:09:45,380  
ill-informed views which may change the

202  
00:09:50,110 --> 00:09:47,810  
minds of some people and that can have a

203  
00:09:53,050 --> 00:09:50,120  
ripple effect which puts families at

204  
00:09:56,170 --> 00:09:53,060  
risk and quote dr. Engel said on

205  
00:09:58,870 --> 00:09:56,180  
Thursday Sydney vitamin company mr.

206  
00:10:00,970 --> 00:09:58,880  
vitamins cancelled a sponsored david

207  
00:10:03,340 --> 00:10:00,980  
wolfe appearance in chatswood after a

208  
00:10:06,340 --> 00:10:03,350  
social media backlash against the

209  
00:10:08,949 --> 00:10:06,350  
company owner of Jing organics David

210  
00:10:10,750 --> 00:10:08,959  
Kingsley said he did not care about the

211  
00:10:12,330 --> 00:10:10,760  
concerns of people and how

212  
00:10:15,130 --> 00:10:12,340  
david wolfe would spread the

213  
00:10:17,560 --> 00:10:15,140

anti-vaccine message quote I'm

214

00:10:19,570 --> 00:10:17,570

anti-vaccine and publicly open about it

215

00:10:22,450 --> 00:10:19,580

just because stuff is peer-reviewed

216

00:10:25,570 --> 00:10:22,460

doesn't mean it's true David Wolfe is a

217

00:10:28,840 --> 00:10:25,580

world health expert in quote mr.

218

00:10:31,090 --> 00:10:28,850

Kingsley said David Wolfe calls himself

219

00:10:35,920 --> 00:10:31,100

a nutritionist believes that the world

220

00:10:38,080 --> 00:10:35,930

is flat and claims gravity is a hoax mr.

221

00:10:41,440 --> 00:10:38,090

Kingsley claimed vaccines cause autism

222

00:10:43,780 --> 00:10:41,450

because he is in the health industry he

223

00:10:46,060 --> 00:10:43,790

makes sauerkraut and fermented foods and

224

00:10:49,390 --> 00:10:46,070

sells organic products and he speaks to

225

00:10:51,430 --> 00:10:49,400

mothers whose children have autism there

226  
00:10:53,740 --> 00:10:51,440  
are over a hundred international studies

227  
00:10:56,500 --> 00:10:53,750  
that have debunked the link first put

228  
00:10:58,810 --> 00:10:56,510  
forward by struck-off dr. andrew

229  
00:11:02,080 --> 00:10:58,820  
wakefield and that story comes to us

230  
00:11:04,720 --> 00:11:02,090  
from jane hansen published at the Daily

231  
00:11:15,100 --> 00:11:04,730  
Telegraph Daily Telegraph comdata you on

232  
00:11:25,510 --> 00:11:15,110  
the 26 of february it's the raw skeptic

233  
00:11:27,310 --> 00:11:25,520  
report with Heidi Robertson and joining

234  
00:11:29,050 --> 00:11:27,320  
me now on the line all the way from the

235  
00:11:31,330 --> 00:11:29,060  
north coast of New South Wales the far

236  
00:11:34,930 --> 00:11:31,340  
north coast it's the raw skeptic herself

237  
00:11:37,060 --> 00:11:34,940  
Heidi Robertson hello Heidi hello hello

238  
00:11:40,570 --> 00:11:37,070

I'm well and so good to catch up with

239

00:11:44,440 --> 00:11:40,580

you we don't actually chat often do we I

240

00:11:46,330 --> 00:11:44,450

know it's usually usually by a text

241

00:11:48,850 --> 00:11:46,340

message about something skeptical that's

242

00:11:50,740 --> 00:11:48,860

going on yeah it really is and i must

243

00:11:53,200 --> 00:11:50,750

say thank you for your reports over the

244

00:11:54,400 --> 00:11:53,210

last couple of years the raw skeptic

245

00:11:57,340 --> 00:11:54,410

report is certainly one of the

246

00:11:59,710 --> 00:11:57,350

highlights of of the skeptic zone well

247

00:12:01,960 --> 00:11:59,720

i'm looking forward to doing more soon

248

00:12:04,360 --> 00:12:01,970

it's been a little bit hectic lately oh

249

00:12:07,530 --> 00:12:04,370

yes well life gets in the way sometime

250

00:12:12,400 --> 00:12:07,540

now we just heard about this guy this

251  
00:12:14,230 --> 00:12:12,410  
david wolfe avocado Wolfe who is heading

252  
00:12:16,240 --> 00:12:14,240  
your way up to your neck of the woods

253  
00:12:19,030 --> 00:12:16,250  
and I think you were partly responsible

254  
00:12:22,090 --> 00:12:19,040  
for an open letter about about this what

255  
00:12:26,890 --> 00:12:22,100  
can you tell me about that yeah so David

256  
00:12:29,760 --> 00:12:26,900  
avocado is coming to Australia for an

257  
00:12:32,590 --> 00:12:29,770  
Australian tour of most skeptical

258  
00:12:36,640 --> 00:12:32,600  
listeners would probably have heard of

259  
00:12:39,400 --> 00:12:36,650  
him before he speaks on a range of

260  
00:12:41,800 --> 00:12:39,410  
issues and we're not really concerned

261  
00:12:45,250 --> 00:12:41,810  
with any of any of the stuff that he

262  
00:12:48,310 --> 00:12:45,260  
talks about apart from his views on

263  
00:12:52,660 --> 00:12:48,320

vaccination which which are misinformed

264

00:12:54,820 --> 00:12:52,670

and to do with vaccinations so we're not

265

00:12:58,420 --> 00:12:54,830

that happy that he might be coming to

266

00:13:02,440 --> 00:12:58,430

this region where as everyone knows our

267

00:13:05,230 --> 00:13:02,450

vaccination rates are abysmal enough as

268

00:13:08,050 --> 00:13:05,240

it is and we're concerned that if he

269

00:13:10,510 --> 00:13:08,060

does get a platform by a venue hosting

270

00:13:14,470 --> 00:13:10,520

him in this region that he will sway

271

00:13:17,770 --> 00:13:14,480

even more people who might be hesitant

272

00:13:19,660 --> 00:13:17,780

and and not really sure what they think

273

00:13:21,760 --> 00:13:19,670

on the whole vaccination topic you might

274

00:13:23,440 --> 00:13:21,770

you might scare them into not

275

00:13:27,040 --> 00:13:23,450

vaccinating so that's the last thing we

276

00:13:30,220 --> 00:13:27,050

need in this region I mean Byron Bay

277

00:13:32,260 --> 00:13:30,230

where where he's going to be speaking

278

00:13:35,190 --> 00:13:32,270

just up the road at the gold coast where

279

00:13:38,770 --> 00:13:35,200

he'll be appearing the following night

280

00:13:41,470 --> 00:13:38,780

these are hot spots for tourism as well

281

00:13:44,410 --> 00:13:41,480

like having Byron Bay alone gets I think

282

00:13:48,070 --> 00:13:44,420

2 million visitors every year oh sure

283

00:13:51,370 --> 00:13:48,080

yeah it's a very popular place as is the

284

00:13:55,120 --> 00:13:51,380

gold coast for overseas visitors and I

285

00:13:57,420 --> 00:13:55,130

overseas visitors that might come from

286

00:13:59,950 --> 00:13:57,430

countries where measles and

287

00:14:03,100 --> 00:13:59,960

whooping-cough and diphtheria and all

288

00:14:05,110 --> 00:14:03,110

these things might still be endemic they

289

00:14:09,010 --> 00:14:05,120

bring them over here unknowingly and

290

00:14:10,840 --> 00:14:09,020

then staying in regions with low

291

00:14:13,060 --> 00:14:10,850

vaccination uptake like the northern

292

00:14:16,270 --> 00:14:13,070

rivers and gold coast as well as low

293

00:14:20,470 --> 00:14:16,280

vaccination rates it's just asking for

294

00:14:24,100 --> 00:14:20,480

an outbreak to occur so the efforts that

295

00:14:26,530 --> 00:14:24,110

we're trying to to put into increasing

296

00:14:28,660 --> 00:14:26,540

vaccination uptake here I'm not going to

297

00:14:32,200 --> 00:14:28,670

be helped by having someone like mr.

298

00:14:35,740 --> 00:14:32,210

Wolfe speaking and perhaps on

299

00:14:38,170 --> 00:14:35,750

vaccination what do you think is behind

300

00:14:40,390 --> 00:14:38,180

his popularity among certain circles is

301  
00:14:42,580 --> 00:14:40,400  
it because he just comes out without

302  
00:14:44,520 --> 00:14:42,590  
rageous conspiracy theories or is it

303  
00:14:48,640 --> 00:14:44,530  
because people see him as some sort of

304  
00:14:51,160 --> 00:14:48,650  
crusader for the truth I'm not sure I

305  
00:14:54,280 --> 00:14:51,170  
mean I'm not a follower myself of him on

306  
00:14:58,890 --> 00:14:54,290  
facebook so i don't know but from what

307  
00:15:02,260 --> 00:14:58,900  
i've heard he and i know that other

308  
00:15:04,630 --> 00:15:02,270  
successful sites do this as well they

309  
00:15:07,720 --> 00:15:04,640  
post there's really nice and

310  
00:15:10,600 --> 00:15:07,730  
inspirational memes and there's nothing

311  
00:15:12,190 --> 00:15:10,610  
we wish or anything about them they're

312  
00:15:13,540 --> 00:15:12,200  
quite reasonable and they're nice and

313  
00:15:17,530 --> 00:15:13,550

they make you feel all warm and fluffy

314

00:15:19,480 --> 00:15:17,540

inside but okay and you know speaking to

315

00:15:23,230 --> 00:15:19,490

a lot of people who do follow him a lot

316

00:15:25,690 --> 00:15:23,240

of them don't know about his more wacky

317

00:15:27,640 --> 00:15:25,700

beliefs like chocolate being an octave

318

00:15:29,580 --> 00:15:27,650

of the Sun and gravity being a hoax and

319

00:15:32,830 --> 00:15:29,590

mushrooms being from outer space and

320

00:15:36,160 --> 00:15:32,840

people don't know about those beliefs

321

00:15:38,680 --> 00:15:36,170

that he had he has they they they like

322

00:15:42,400 --> 00:15:38,690

him on Facebook because of the warm and

323

00:15:43,920 --> 00:15:42,410

fluffy inspirational memes hmm I wish

324

00:15:48,690 --> 00:15:43,930

gravity was a hoax

325

00:15:50,970 --> 00:15:48,700

I wish wouldn't that be fun but you are

326

00:15:54,960 --> 00:15:50,980

you wrote an open letter about about

327

00:15:58,079 --> 00:15:54,970

this character huh yeah yes so we wrote

328

00:16:00,420 --> 00:15:58,089

an open letter on our Northern Rivers

329

00:16:04,170 --> 00:16:00,430

vaccination supporters Facebook page and

330

00:16:08,610 --> 00:16:04,180

we addressed it to Jing organics which

331

00:16:12,889 --> 00:16:08,620

is the the venue that has agreed to host

332

00:16:16,800 --> 00:16:12,899

him in byron bay also to the local

333

00:16:21,019 --> 00:16:16,810

newspaper the Northern Star and we also

334

00:16:24,480 --> 00:16:21,029

addressed it to ABC north coast so

335

00:16:27,900 --> 00:16:24,490

within about three minutes of me posting

336

00:16:29,970 --> 00:16:27,910

it up on our site and journalists from

337

00:16:36,030 --> 00:16:29,980

the Northern Star gone into contact with

338

00:16:38,790 --> 00:16:36,040

us and published a piece on it and our

339

00:16:41,490 --> 00:16:38,800

friend Jane hats and also got in touch

340

00:16:44,460 --> 00:16:41,500

and did a piece on it for The Sunday

341

00:16:47,579 --> 00:16:44,470

Telegraph which came out yesterday in

342

00:16:50,790 --> 00:16:47,589

preet and much more comprehensive paste

343

00:16:53,730 --> 00:16:50,800

online well Heidi for the benefit of our

344

00:17:00,900 --> 00:16:53,740

listeners let's have you now read out

345

00:17:04,049 --> 00:17:00,910

that open letter an open letter to Jing

346

00:17:07,020 --> 00:17:04,059

organics ABC north coast and the

347

00:17:10,380 --> 00:17:07,030

Northern Star to also be posted on their

348

00:17:12,240 --> 00:17:10,390

respective Facebook pages we wish to

349

00:17:15,270 --> 00:17:12,250

bring your attention to the upcoming

350

00:17:18,569 --> 00:17:15,280

talk that David avocado Wolfe has been

351

00:17:20,730 --> 00:17:18,579

booked for in byron bay we have concerns

352

00:17:22,949 --> 00:17:20,740

that in this region of already

353

00:17:26,579 --> 00:17:22,959

dangerously low vaccination rates a

354

00:17:28,319 --> 00:17:26,589

known anti-vaccination activist will be

355

00:17:30,480 --> 00:17:28,329

given a platform to spread his

356

00:17:33,870 --> 00:17:30,490

misinformation surrounding the safety

357

00:17:35,610 --> 00:17:33,880

and efficacy of vaccination as you're

358

00:17:37,950 --> 00:17:35,620

aware the northern rivers and in

359

00:17:40,610 --> 00:17:37,960

particular byron bay is visited by

360

00:17:43,320 --> 00:17:40,620

almost two million tourists annually

361

00:17:45,150 --> 00:17:43,330

this puts the region at an increased

362

00:17:46,530 --> 00:17:45,160

risk of travelers coming in from

363

00:17:49,350 --> 00:17:46,540

countries where vaccine-preventable

364

00:17:52,440 --> 00:17:49,360

diseases like measles and diphtheria are

365

00:17:54,990 --> 00:17:52,450

endemic if a traveler comes in already

366

00:17:56,540 --> 00:17:55,000

infected and stays in an area of low

367

00:17:58,730 --> 00:17:56,550

vaccination update

368

00:18:01,130 --> 00:17:58,740

it is placing the whole community at

369

00:18:03,470 --> 00:18:01,140

risk of an outbreak at the Northern

370

00:18:05,150 --> 00:18:03,480

Rivers vaccination supporters we are

371

00:18:06,620 --> 00:18:05,160

committed to providing the community

372

00:18:08,870 --> 00:18:06,630

with accurate information about

373

00:18:11,750 --> 00:18:08,880

vaccination and correcting

374

00:18:13,790 --> 00:18:11,760

misinformation where we see it in fact

375

00:18:15,340 --> 00:18:13,800

we have recently been endorsed in this

376

00:18:17,840 --> 00:18:15,350

capacity by the World Health

377

00:18:19,430 --> 00:18:17,850

Organization and now appear on their

378

00:18:21,170 --> 00:18:19,440

website as a trusted source of

379

00:18:25,100 --> 00:18:21,180

information on the safety and efficacy

380

00:18:27,440 --> 00:18:25,110

of vaccination hosting anti-vaccination

381

00:18:29,060 --> 00:18:27,450

activists in this area does nothing to

382

00:18:32,210 --> 00:18:29,070

help accurately inform the community

383

00:18:34,730 --> 00:18:32,220

about vaccines but it does place them at

384

00:18:36,380 --> 00:18:34,740

risk by exposing them to falsehoods that

385

00:18:38,150 --> 00:18:36,390

could easily lead them to stop

386

00:18:41,120 --> 00:18:38,160

vaccinating themselves and their

387

00:18:43,520 --> 00:18:41,130

children we see this as a public health

388

00:18:44,960 --> 00:18:43,530

issue and ask that you support us in our

389

00:18:47,720 --> 00:18:44,970

efforts to prevent the spread of

390

00:18:50,930 --> 00:18:47,730

misinformation like that which mr. Wolfe

391

00:18:53,270 --> 00:18:50,940

has spoken about in the past we would

392

00:18:56,060 --> 00:18:53,280

like the venue booked and indeed any

393

00:18:57,740 --> 00:18:56,070

other potential venues to reconsider

394

00:19:01,940 --> 00:18:57,750

hosting mr. Wolfe with his

395

00:19:03,950 --> 00:19:01,950

conspiratorial dangerous ideas we will

396

00:19:07,160 --> 00:19:03,960

be accused of trying to suppress free

397

00:19:09,500 --> 00:19:07,170

speech however mr. Wolfe's free speech

398

00:19:11,480 --> 00:19:09,510

is hardly being suppressed when he still

399

00:19:13,700 --> 00:19:11,490

has plenty of other outlets on which to

400

00:19:15,890 --> 00:19:13,710

publish his opinions such as his

401  
00:19:18,860 --> 00:19:15,900  
facebook page which has over 10 million

402  
00:19:20,600 --> 00:19:18,870  
followers we believe that as a community

403  
00:19:22,460 --> 00:19:20,610  
group we have the right to ask that

404  
00:19:24,380 --> 00:19:22,470  
venues in our region do not further

405  
00:19:27,050 --> 00:19:24,390  
assist him by providing him with a

406  
00:19:29,770 --> 00:19:27,060  
platform here directly at odds with what

407  
00:19:32,870 --> 00:19:29,780  
we have been working so hard to achieve

408  
00:19:40,960 --> 00:19:32,880  
sincerely Northern Rivers vaccination

409  
00:19:46,220 --> 00:19:44,150  
so Heidi what do you think listeners at

410  
00:19:49,640 --> 00:19:46,230  
the skeptic zone especially the ones in

411  
00:19:53,150 --> 00:19:49,650  
your area could do about this uh I think

412  
00:19:55,820 --> 00:19:53,160  
just well first of all it doesn't hurt

413  
00:19:58,190 --> 00:19:55,830

to get in touch with their new owners I

414

00:20:00,770 --> 00:19:58,200

mean we know in the past that when venue

415

00:20:03,470 --> 00:20:00,780

owners have been made aware of the

416

00:20:06,800 --> 00:20:03,480

nature of some of these talks they've

417

00:20:10,550 --> 00:20:06,810

decided to to not to not host the

418

00:20:15,110 --> 00:20:10,560

speaker however having said that in this

419

00:20:17,810 --> 00:20:15,120

case the speaker that the venue host has

420

00:20:20,660 --> 00:20:17,820

been contacted and is pretty unrepentant

421

00:20:23,030 --> 00:20:20,670

in fact he's a staunch anti-vaccination

422

00:20:24,680 --> 00:20:23,040

advocate himself so mm-hmm that's

423

00:20:28,700 --> 00:20:24,690

probably not going to work in this case

424

00:20:32,180 --> 00:20:28,710

and I would just encourage two people to

425

00:20:38,990 --> 00:20:32,190

tell their friends and family about mr.

426

00:20:41,180 --> 00:20:39,000

avocados belief and and and have how the

427

00:20:43,820 --> 00:20:41,190

message the anti-vaccination message

428

00:20:46,700 --> 00:20:43,830

that he spreads is is dangerous and and

429

00:20:50,690 --> 00:20:46,710

not helpful and to maybe think twice

430

00:20:52,790 --> 00:20:50,700

about um about sharing his his posts on

431

00:20:56,150 --> 00:20:52,800

Facebook there's actually a hashtag as

432

00:20:59,180 --> 00:20:56,160

well call the hashtag don't cry wolf on

433

00:21:03,830 --> 00:20:59,190

on so this you know there's a whole

434

00:21:07,010 --> 00:21:03,840

trending hashtag that people can follow

435

00:21:09,590 --> 00:21:07,020

as well well Heidi thank you again for

436

00:21:11,570 --> 00:21:09,600

your efforts this wolf character seems

437

00:21:12,950 --> 00:21:11,580

to be quite a character indeed with some

438

00:21:16,190 --> 00:21:12,960

of these bizarre beliefs but yes

439

00:21:18,070 --> 00:21:16,200

ultimately if the convinces parents of

440

00:21:22,340 --> 00:21:18,080

some of the nonsense it could lead to

441

00:21:24,680 --> 00:21:22,350

two very undesirable consequences but

442

00:21:27,620 --> 00:21:24,690

I'm glad you're there and my kind

443

00:21:28,580 --> 00:21:27,630

regards to Alison too and all the crew

444

00:21:31,370 --> 00:21:28,590

there at the northern rivers

445

00:21:33,920 --> 00:21:31,380

vaccinations supporters who continue to

446

00:21:37,580 --> 00:21:33,930

do a marvelous job after all these years

447

00:21:41,390 --> 00:21:37,590

huh the years are starting to go by yes

448

00:21:44,840 --> 00:21:41,400

okay well we very much appreciate all

449

00:21:46,850 --> 00:21:44,850

the support that you and members give us

450

00:21:48,950 --> 00:21:46,860

couldn't do it without you okay Heidi

451

00:21:51,950 --> 00:21:48,960

for now goodbye but we'll keep our

452

00:21:55,019 --> 00:21:51,960

listeners up to date on this issue okay

453

00:22:01,029 --> 00:21:58,000

hold the phone hold the press hold your

454

00:22:04,299 --> 00:22:01,039

horses some late-breaking news on this

455

00:22:07,779 --> 00:22:04,309

story once again from Jane Hansen who

456

00:22:11,380 --> 00:22:07,789

writes in The Sunday Telegraph and for

457

00:22:14,799 --> 00:22:11,390

anti vax wolf by Jane Hansen Sydney's

458

00:22:17,680 --> 00:22:14,809

International Convention Center ICC has

459

00:22:20,680 --> 00:22:17,690

ignored community outrage and refused to

460

00:22:24,730 --> 00:22:20,690

cancel an event with anti-vaccination

461

00:22:28,149 --> 00:22:24,740

spooker david avocado Wolfe however

462

00:22:31,029 --> 00:22:28,159

wolf's quote raw cacao dance party and

463

00:22:33,610 --> 00:22:31,039

quote at marrickville Town Hall last

464

00:22:36,519 --> 00:22:33,620

night was canceled by the inner west

465

00:22:40,120 --> 00:22:36,529

council now after it was contacted by

466

00:22:42,460 --> 00:22:40,130

The Sunday Telegraph quote council

467

00:22:44,560 --> 00:22:42,470

decided to cancel the event after

468

00:22:47,919 --> 00:22:44,570

numerous complaints and quote administer

469

00:22:50,680 --> 00:22:47,929

Richard Pearson said code it is clear

470

00:22:52,690 --> 00:22:50,690

our community feels extremely strongly

471

00:22:55,630 --> 00:22:52,700

about mr. wolf and his highly

472

00:22:58,600 --> 00:22:55,640

unconventional views particularly around

473

00:23:01,840 --> 00:22:58,610

the issue of vaccinations they have made

474

00:23:04,840 --> 00:23:01,850

it clear they feel hosting mr. wolf in a

475

00:23:07,240 --> 00:23:04,850

council-owned venue is a validation and

476  
00:23:09,880 --> 00:23:07,250  
endorsement of his anti immunization

477  
00:23:13,299 --> 00:23:09,890  
stance and quote mr. Pearson said but

478  
00:23:16,419 --> 00:23:13,309  
the ICC is happy to host its four

479  
00:23:18,940 --> 00:23:16,429  
hundred and forty dollar ahead seminar

480  
00:23:22,060 --> 00:23:18,950  
with wolf who believes gravity stock

481  
00:23:25,779 --> 00:23:22,070  
cick the earth is flat and vaccines

482  
00:23:27,840 --> 00:23:25,789  
cause cancer many of the sponsors are

483  
00:23:30,909 --> 00:23:27,850  
alternative health advocates with

484  
00:23:34,120 --> 00:23:30,919  
anti-vaccination views main sponsor

485  
00:23:36,190 --> 00:23:34,130  
super feast is owned by Mason Taylor who

486  
00:23:40,240 --> 00:23:36,200  
has publicly criticised campaigns like

487  
00:23:43,720 --> 00:23:40,250  
no jab no play and suggests a mushroom

488  
00:23:45,970 --> 00:23:43,730

strain called Rishi has been shown to be

489

00:23:49,120 --> 00:23:45,980

just as effective quote there should be

490

00:23:52,889 --> 00:23:49,130

a no Rishi no play campaign end quote he

491

00:23:55,930 --> 00:23:52,899

said another sponsor one group is run by

492

00:23:58,330 --> 00:23:55,940

anti-vaccine activist Norrell Chenery

493

00:24:01,210 --> 00:23:58,340

who was president of the vaccine

494

00:24:02,919 --> 00:24:01,220

information service she has given our

495

00:24:05,660 --> 00:24:02,929

advice online that children with

496

00:24:09,800 --> 00:24:05,670

whooping cough should be treated with

497

00:24:12,200 --> 00:24:09,810

herbal tea and Rescue Remedy opposition

498

00:24:15,140 --> 00:24:12,210

health spokesman Walt Secord said wolf

499

00:24:17,720 --> 00:24:15,150

had quote a vicious opposition to

500

00:24:19,520 --> 00:24:17,730

life-saving vaccinations end quote and

501  
00:24:21,730 --> 00:24:19,530  
his claim that they were linked to

502  
00:24:25,610 --> 00:24:21,740  
autism and cancer was a ridiculous

503  
00:24:30,140 --> 00:24:25,620  
Samantha glass spokeswoman for icc said

504  
00:24:32,300 --> 00:24:30,150  
health activism events quote assured icc

505  
00:24:35,240 --> 00:24:32,310  
sydney that the content of this

506  
00:24:37,430 --> 00:24:35,250  
weekend's event is specific to nutrition

507  
00:24:40,160 --> 00:24:37,440  
and healthy foods they have confirmed

508  
00:24:42,860 --> 00:24:40,170  
that david wolfe is not there to and is

509  
00:24:45,680 --> 00:24:42,870  
never going to discuss the topic of

510  
00:24:48,170 --> 00:24:45,690  
vaccination the venue manager recognizes

511  
00:24:50,900 --> 00:24:48,180  
the diverse views and beliefs of the

512  
00:24:53,150 --> 00:24:50,910  
community in which it operates however

513  
00:24:55,790 --> 00:24:53,160

it is not its role to determine which of

514

00:24:59,720 --> 00:24:55,800

those views can or cannot be represented

515

00:25:02,360 --> 00:24:59,730

at events at icc sydney unless safety or

516

00:25:04,400 --> 00:25:02,370

legality is compromised and quote she

517

00:25:06,080 --> 00:25:04,410

said when that story comes to us from

518

00:25:20,890 --> 00:25:06,090

jane hansen in the sunday telegraph

519

00:25:24,470 --> 00:25:20,900

published on the fifth of march 2017 and

520

00:25:28,400 --> 00:25:24,480

now direct from the cafe at australia's

521

00:25:29,350 --> 00:25:28,410

science channel its brouhaha with kelly

522

00:25:32,160 --> 00:25:29,360

wang

523

00:25:34,930 --> 00:25:32,170

[Music]

524

00:25:38,320 --> 00:25:34,940

I'm so excited to be here honoring

525

00:25:41,200 --> 00:25:38,330

science at a 20-17 oscars at the

526  
00:25:43,870 --> 00:25:41,210  
ceremony african american nasa physicist

527  
00:25:45,910 --> 00:25:43,880  
and mathematician Katherine Johnson the

528  
00:25:47,920 --> 00:25:45,920  
inspiration behind the hit movie hidden

529  
00:25:50,470 --> 00:25:47,930  
figures was invited on stage two

530  
00:25:52,780 --> 00:25:50,480  
standing ovations and if that didn't

531  
00:25:56,620 --> 00:25:52,790  
bring a tear to your eye well nothing

532  
00:25:58,930 --> 00:25:56,630  
will and to Iranian Americans engineer

533  
00:26:01,210 --> 00:25:58,940  
and wells fest self-funded astronaut and

534  
00:26:03,940 --> 00:26:01,220  
no Cheyenne sorry and former NASA

535  
00:26:06,280 --> 00:26:03,950  
scientists furrows naderi accepted the

536  
00:26:09,090 --> 00:26:06,290  
best foreign language Oscar on behalf of

537  
00:26:12,070 --> 00:26:09,100  
Iranian film director as car for hottie

538  
00:26:14,490 --> 00:26:12,080

then of course this is scientific and

539

00:26:16,630 --> 00:26:14,500

technical awards held two weeks ago

540

00:26:18,460 --> 00:26:16,640

everything from advances in camera

541

00:26:20,650 --> 00:26:18,470

senses to development of new facial

542

00:26:23,170 --> 00:26:20,660

tracking technologies where monks there

543

00:26:26,170 --> 00:26:23,180

is recognized as you so without further

544

00:26:37,170 --> 00:26:26,180

ado the most accurate depiction of

545

00:26:42,520 --> 00:26:37,180

science in a film goes to lala land oh

546

00:26:47,850 --> 00:26:42,530

wait a second guys thank you oh this is

547

00:26:59,060 --> 00:26:51,220

for more brouhaha and Australian science

548

00:27:08,580 --> 00:27:03,590

[Music]

549

00:27:12,690 --> 00:27:08,590

from the Glasgow skeptics homeopathy in

550

00:27:14,880 --> 00:27:12,700

the UK with Michael Marshall now this is

551  
00:27:20,700 --> 00:27:14,890  
happening on the twenty-seventh of march

552  
00:27:25,560 --> 00:27:20,710  
from 7pm the Admiral bar 72 a waterloo

553  
00:27:27,600 --> 00:27:25,570  
street in glasgow homeopathy is one of

554  
00:27:30,120 --> 00:27:27,610  
the most widely debunked forms of

555  
00:27:32,670 --> 00:27:30,130  
alternative medicine yet homeopathic

556  
00:27:35,460 --> 00:27:32,680  
remedies adorn the shelves of respected

557  
00:27:39,360 --> 00:27:35,470  
pharmacies and are funded by taxpayers

558  
00:27:41,370 --> 00:27:39,370  
on the NHS how big of a problem is this

559  
00:27:44,370 --> 00:27:41,380  
using information and personal

560  
00:27:46,520 --> 00:27:44,380  
experiences gathered during his last six

561  
00:27:49,920 --> 00:27:46,530  
years of campaigning against homeopathy

562  
00:27:52,290 --> 00:27:49,930  
Michael Marshall will highlight how much

563  
00:27:54,540 --> 00:27:52,300

money is spent on homeopathic remedies

564

00:27:57,330 --> 00:27:54,550

and how this gives undeserved

565

00:27:59,730 --> 00:27:57,340

credibility to homeopathy how such

566

00:28:03,270 --> 00:27:59,740

remedies can lead to genuine harm and

567

00:28:05,490 --> 00:28:03,280

what you can do to help this event is

568

00:28:07,470 --> 00:28:05,500

free to attend although they will be

569

00:28:09,210 --> 00:28:07,480

asking for donations at the end of the

570

00:28:11,910 --> 00:28:09,220

talk but you are under no obligation

571

00:28:15,660 --> 00:28:11,920

whatsoever to donate maybe you can

572

00:28:17,940 --> 00:28:15,670

donate homeopathic Lee hmm however any

573

00:28:20,220 --> 00:28:17,950

money that is donated is used to fund

574

00:28:23,100 --> 00:28:20,230

the overhead costs and travel and

575

00:28:25,170 --> 00:28:23,110

accommodation for speakers so that's

576

00:28:28,950 --> 00:28:25,180

homeopathy in the UK with Michael

577

00:28:32,640 --> 00:28:28,960

Marshall the 27th of March at 7pm the

578

00:28:35,010 --> 00:28:32,650

Admiral bar 72 a waterloo street in

579

00:28:37,290 --> 00:28:35,020

glasgow for more information check out

580

00:28:40,110 --> 00:28:37,300

the facebook page of the glasgow

581

00:28:42,740 --> 00:28:40,120

skeptics or just follow the links from

582

00:28:54,640 --> 00:28:42,750

this week's show knows

583

00:29:05,899 --> 00:29:03,190

[Music]

584

00:29:08,299 --> 00:29:05,909

in all the years of Australian skeptics

585

00:29:11,570 --> 00:29:08,309

had seen our skeptics in Australia

586

00:29:14,389 --> 00:29:11,580

kicked off in 1980-81 around that time

587

00:29:15,680 --> 00:29:14,399

the Victorian skeptics based in

588

00:29:18,350 --> 00:29:15,690

Melbourne have been one of the more

589

00:29:21,830 --> 00:29:18,360

active groups it's good to see they're

590

00:29:23,989 --> 00:29:21,840

keeping up this tradition as we read a

591

00:29:26,690 --> 00:29:23,999

report from skeptics comdata you

592

00:29:30,590 --> 00:29:26,700

published on the 17th of every item

593

00:29:35,169 --> 00:29:30,600

mendham vic skeptics reveal dangerous

594

00:29:37,399 --> 00:29:35,179

products on sale at no burn hospital

595

00:29:39,139 --> 00:29:37,409

Victorian skeptics committee member

596

00:29:41,419 --> 00:29:39,149

Peter Hogan and president Chris guest

597

00:29:43,580 --> 00:29:41,429

have revealed that a dangerous

598

00:29:46,100 --> 00:29:43,590

homeopathic teething product was

599

00:29:48,350 --> 00:29:46,110

available at melvins Royal Children's

600

00:29:51,109 --> 00:29:48,360

Hospital the product Highlands baby

601  
00:29:55,070 --> 00:29:51,119  
teething tablets had earlier been found

602  
00:29:57,109 --> 00:29:55,080  
by the US FDA to contain inconsistent

603  
00:29:59,629 --> 00:29:57,119  
amounts of the toxic substance

604  
00:30:02,840 --> 00:29:59,639  
belladonna and posed a risk to children

605  
00:30:04,489 --> 00:30:02,850  
vic skeptics member Peter Hogan has been

606  
00:30:06,470 --> 00:30:04,499  
investigating the sale of Highlands

607  
00:30:09,499 --> 00:30:06,480  
Teeling products in Australia he told

608  
00:30:11,930 --> 00:30:09,509  
Fairfax Media that quote I was quite

609  
00:30:13,909 --> 00:30:11,940  
shocked that the pharmacy at the Royal

610  
00:30:17,299 --> 00:30:13,919  
Children's Hospital was selling the

611  
00:30:19,430 --> 00:30:17,309  
stuff I'm concerned parents may be

612  
00:30:22,460 --> 00:30:19,440  
gambling with their baby's health end

613  
00:30:25,009 --> 00:30:22,470

quote the FDA investigated the products

614

00:30:27,950 --> 00:30:25,019

links to the deaths of ten babies in

615

00:30:29,749 --> 00:30:27,960

America it urged parents to dispose of

616

00:30:32,299 --> 00:30:29,759

the tablets and seek medical care

617

00:30:34,789 --> 00:30:32,309

immediately if children experience

618

00:30:37,639 --> 00:30:34,799

symptoms including seizures difficulty

619

00:30:40,129 --> 00:30:37,649

breathing or agitation it requested the

620

00:30:42,409 --> 00:30:40,139

manufacturer standard homeopathic

621

00:30:45,590 --> 00:30:42,419

company to recall the products but the

622

00:30:48,580 --> 00:30:45,600

company refused late last year however a

623

00:30:52,009 --> 00:30:48,590

Highlands media release said it was

624

00:30:54,619 --> 00:30:52,019

discontinuing the distribution of its

625

00:30:56,630 --> 00:30:54,629

teething products in the US with quote

626  
00:30:58,960 --> 00:30:56,640  
much sadness and

627  
00:31:01,070 --> 00:30:58,970  
it after the FDA's safety warning

628  
00:31:04,430 --> 00:31:01,080  
australia's Therapeutic Goods

629  
00:31:06,860 --> 00:31:04,440  
Administration investigated hyland's

630  
00:31:09,710 --> 00:31:06,870  
teething and tablets and gel after the

631  
00:31:12,170 --> 00:31:09,720  
FDA issued its safety alert but it

632  
00:31:15,170 --> 00:31:12,180  
apparently found no quality issues and

633  
00:31:17,630 --> 00:31:15,180  
said no action would be taken Hogan

634  
00:31:20,000 --> 00:31:17,640  
questioned whether more testing was

635  
00:31:22,460 --> 00:31:20,010  
required considering the FDA's finding

636  
00:31:25,460 --> 00:31:22,470  
of inconsistent levels of belladonna

637  
00:31:27,410 --> 00:31:25,470  
between batches concerns about the

638  
00:31:30,520 --> 00:31:27,420

ingredients of teething gels go back

639

00:31:33,740 --> 00:31:30,530

some years in Britain the ingredient

640

00:31:36,650 --> 00:31:33,750

solicited was removed from bonjela

641

00:31:39,170 --> 00:31:36,660

teething gel are free 2002 study by the

642

00:31:41,540 --> 00:31:39,180

commission on human medicines revealed

643

00:31:43,250 --> 00:31:41,550

it to be hazardous the study published

644

00:31:45,260 --> 00:31:43,260

in the medical journal of Australia

645

00:31:47,540 --> 00:31:45,270

found that chronic solicited

646

00:31:50,120 --> 00:31:47,550

intoxication could occur in children

647

00:31:53,500 --> 00:31:50,130

using these over-the-counter teething

648

00:31:55,910 --> 00:31:53,510

Jol's even at close to recommended doses

649

00:31:58,630 --> 00:31:55,920

symptoms of teething gel related

650

00:32:02,120 --> 00:31:58,640

poisonings include gastrointestinal

651  
00:32:05,080 --> 00:32:02,130  
problems hyperventilation tremor and

652  
00:32:08,300 --> 00:32:05,090  
memory lapses and the risk of death a

653  
00:32:10,940 --> 00:32:08,310  
TGA spokeswoman told Fairfax Media that

654  
00:32:13,100 --> 00:32:10,950  
samples had been tested from two batches

655  
00:32:15,680 --> 00:32:13,110  
of the tablets and no problems were

656  
00:32:18,380 --> 00:32:15,690  
identified she said one batch of the

657  
00:32:20,540 --> 00:32:18,390  
teething gel was tested and the level of

658  
00:32:23,630 --> 00:32:20,550  
belladonna did not warrant safety

659  
00:32:25,670 --> 00:32:23,640  
regulatory action quote however based on

660  
00:32:28,100 --> 00:32:25,680  
the information from the FDA we are

661  
00:32:30,460 --> 00:32:28,110  
considering where their testing of more

662  
00:32:32,780 --> 00:32:30,470  
samples will be useful in quote she said

663  
00:32:34,280 --> 00:32:32,790

Highlands website lists numerous

664

00:32:36,680 --> 00:32:34,290

pharmacies that stock it's teething

665

00:32:39,350 --> 00:32:36,690

products in Australia Fairfax Media

666

00:32:41,300 --> 00:32:39,360

found it for sale at drew would pharmacy

667

00:32:43,640 --> 00:32:41,310

at the Royal Children's Hospital on

668

00:32:45,260 --> 00:32:43,650

Thursday vic skeptics president chris

669

00:32:48,260 --> 00:32:45,270

guest had earlier written to the

670

00:32:51,200 --> 00:32:48,270

pharmacy with the skeptics concerns but

671

00:32:53,420 --> 00:32:51,210

had not heard back belladonna also known

672

00:32:55,580 --> 00:32:53,430

as deadly nightshade as a plant that has

673

00:32:57,860 --> 00:32:55,590

been used in cosmetics and herbal

674

00:33:00,650 --> 00:32:57,870

medicine since the Middle Ages it is

675

00:33:04,390 --> 00:33:00,660

also used as a recreational drug because

676  
00:33:07,070 --> 00:33:04,400  
of the hallucinations it can produce and

677  
00:33:10,610 --> 00:33:07,080  
that story comes to us from skeptics

678  
00:33:12,260 --> 00:33:10,620  
come you and good on the Victorians

679  
00:33:16,190 --> 00:33:12,270  
sheptock for keeping up the pressure on

680  
00:33:19,970 --> 00:33:16,200  
all manner of Wu and quackery as the

681  
00:33:23,510 --> 00:33:19,980  
years drag on this fight against

682  
00:33:27,110 --> 00:33:23,520  
nonsense never ends and again and again

683  
00:33:29,870 --> 00:33:27,120  
we read about the real dangers of the

684  
00:33:44,940 --> 00:33:29,880  
Attic quackery known as homeopathy

685  
00:33:48,940 --> 00:33:47,530  
today this is dr. Karl Karl Christmas he

686  
00:33:51,190 --> 00:33:48,950  
proud to be a skeptic and you can find

687  
00:33:56,180 --> 00:33:51,200  
out more about me at dr. Karl calm and

688  
00:33:56,190 --> 00:34:03,770

[Music]

689

00:34:11,700 --> 00:34:08,430

here's my not spooky action at a

690

00:34:16,240 --> 00:34:14,470

i'm here at sydney botanical gardens

691

00:34:18,640 --> 00:34:16,250

today to speak to four remarkable people

692

00:34:21,550 --> 00:34:18,650

who are working on the restore and renew

693

00:34:24,430 --> 00:34:21,560

project which is gene sequencing at

694

00:34:27,580 --> 00:34:24,440

least 200 species of australian native

695

00:34:30,580 --> 00:34:27,590

plants in areas that have been damaged

696

00:34:33,040 --> 00:34:30,590

either by just urban urban encroachment

697

00:34:35,350 --> 00:34:33,050

or the land has been cleared or it's

698

00:34:37,060 --> 00:34:35,360

been an open cut mining site that sort

699

00:34:39,520 --> 00:34:37,070

of thing it's a big task ahead of them

700

00:34:42,250 --> 00:34:39,530

we're going to meet dr. Jason Bragg the

701  
00:34:44,410 --> 00:34:42,260  
scientific officer Dr Marlin vandamm

702  
00:34:46,720 --> 00:34:44,420  
earth of biodiversity research officer

703  
00:34:48,310 --> 00:34:46,730  
going to have a chat to dr. Moritz your

704  
00:34:51,070 --> 00:34:48,320  
asset oh he's the senior principal

705  
00:34:53,470 --> 00:34:51,080  
research scientist on restoring who knew

706  
00:34:56,710 --> 00:34:53,480  
and dr. Hannah McPherson she's in charge

707  
00:34:57,730 --> 00:34:56,720  
the biodiversity genetics so basically

708  
00:35:01,290 --> 00:34:57,740  
we're talking to for people that are a

709  
00:35:04,960 --> 00:35:01,300  
lot smarter than me so wish me luck

710  
00:35:05,860 --> 00:35:04,970  
Jason come on in look hey look now now

711  
00:35:07,810 --> 00:35:05,870  
I'm talking about someone who knows

712  
00:35:11,260 --> 00:35:07,820  
what's going on stock to Jason Bragg the

713  
00:35:12,760 --> 00:35:11,270

scientific officer and your I think your

714

00:35:13,810 --> 00:35:12,770

thing could be big data wouldn't it

715

00:35:16,060 --> 00:35:13,820

you're in charge of getting all this

716

00:35:18,370 --> 00:35:16,070

information of the genetic sequencing in

717

00:35:19,990 --> 00:35:18,380

and recording it in what way what are

718

00:35:21,340 --> 00:35:20,000

you doing other than just recording it

719

00:35:22,930 --> 00:35:21,350

what are you doing with your code that

720

00:35:25,630 --> 00:35:22,940

you're writing for it so I'm doing

721

00:35:29,380 --> 00:35:25,640

analysis of the data I'm I'm taking the

722

00:35:32,140 --> 00:35:29,390

data as it comes in as it arrives to us

723

00:35:36,340 --> 00:35:32,150

and I'm trying to turn that into

724

00:35:38,050 --> 00:35:36,350

information that is more accessible to

725

00:35:40,090 --> 00:35:38,060

people trying to make decisions about

726

00:35:42,370 --> 00:35:40,100

where to get their seeds from how much

727

00:35:44,050 --> 00:35:42,380

information would be coming to you in an

728

00:35:45,820 --> 00:35:44,060

in physical form you tell me you're

729

00:35:47,350 --> 00:35:45,830

talking you're talking Petter flops of

730

00:35:49,300 --> 00:35:47,360

information how much you got coming your

731

00:35:51,070 --> 00:35:49,310

way but the data that we're using most

732

00:35:53,020 --> 00:35:51,080

of the time is already arriving in a

733

00:35:56,650 --> 00:35:53,030

fairly condensed form actually so where

734

00:36:00,700 --> 00:35:56,660

it's arriving to me in in quite a

735

00:36:03,220 --> 00:36:00,710

condensed form that is gigabytes certain

736

00:36:05,350 --> 00:36:03,230

certainly rather than terabytes yeah so

737

00:36:07,030 --> 00:36:05,360

let me get this straight you've got 200

738

00:36:10,810 --> 00:36:07,040

species of plants you're looking at an

739

00:36:12,370 --> 00:36:10,820

HBCU plant there's 20,000 genetic

740

00:36:14,080 --> 00:36:12,380

markers at least is that the kind of

741

00:36:16,000 --> 00:36:14,090

information looking for exactly yep

742

00:36:17,680 --> 00:36:16,010

that's precisely and all you got to do

743

00:36:20,380 --> 00:36:17,690

is just record that correctly in a form

744

00:36:23,359 --> 00:36:20,390

that people can understand well yeah so

745

00:36:26,569 --> 00:36:23,369

and it arrives it to me and as you

746

00:36:29,269 --> 00:36:26,579

say it's 20,000 genetic markers so 20

747

00:36:31,220 --> 00:36:29,279

place 20 thousand places in the genome

748

00:36:33,859 --> 00:36:31,230

where the different plants have a

749

00:36:36,859 --> 00:36:33,869

different base a different ACG or tea

750

00:36:40,880 --> 00:36:36,869

and then I try to refine it further than

751

00:36:43,309 --> 00:36:40,890

that I try to do analyses of it to turn

752

00:36:46,789 --> 00:36:43,319

it into a description for each of the

753

00:36:49,970 --> 00:36:46,799

species about how much genetic change

754

00:36:52,460 --> 00:36:49,980

there is among individual plants in that

755

00:36:55,190 --> 00:36:52,470

species when when you go from place to

756

00:36:57,859 --> 00:36:55,200

place so if you go 100 kilometers down

757

00:36:59,480 --> 00:36:57,869

the road or 200 kilometers down the road

758

00:37:01,460 --> 00:36:59,490

from where you're standing how

759

00:37:04,160 --> 00:37:01,470

genetically different to the different

760

00:37:06,380 --> 00:37:04,170

individuals of this plant species get so

761

00:37:09,220 --> 00:37:06,390

you're recording in a digital way the

762

00:37:12,620 --> 00:37:09,230

diversity of a species precisely yep yep

763

00:37:14,420 --> 00:37:12,630

tell me do plants have as much junk DNA

764

00:37:16,789 --> 00:37:14,430

as humans do is there such a thing as

765

00:37:19,789 --> 00:37:16,799

junk DNA in plants it's enormously

766

00:37:22,339 --> 00:37:19,799

variable in fact so there's a species

767

00:37:24,950 --> 00:37:22,349

that occurs in Australia utricularia

768

00:37:29,900 --> 00:37:24,960

Gibbard that has one of the smallest

769

00:37:32,390 --> 00:37:29,910

genomes among flowering plants and if I

770

00:37:34,759 --> 00:37:32,400

recall it was remarkable in that it had

771

00:37:38,299 --> 00:37:34,769

very very little of what we would refer

772

00:37:40,930 --> 00:37:38,309

to as junk DNA on the other hand there

773

00:37:43,729 --> 00:37:40,940

are lots of plant species that have

774

00:37:45,410 --> 00:37:43,739

enormous genome so if the human genome I

775

00:37:47,120 --> 00:37:45,420

can't remember how big the the human

776

00:37:49,039 --> 00:37:47,130

genome is I don't have to that's not

777

00:37:51,319 --> 00:37:49,049

your area no I think it's on the order

778

00:37:53,120 --> 00:37:51,329

of three Giga bases or something like

779

00:37:55,609 --> 00:37:53,130

that but there are pine trees that that

780

00:37:57,470 --> 00:37:55,619

easily have 20 so so they really run the

781

00:38:00,589 --> 00:37:57,480

gamut yeah plants are extraordinarily

782

00:38:02,690 --> 00:38:00,599

diverse yeah I was going to ask us like

783

00:38:04,039 --> 00:38:02,700

we have to get into a few anomalous

784

00:38:07,160 --> 00:38:04,049

theory see what are you reckon about

785

00:38:08,660 --> 00:38:07,170

when the ABC the alien big cats people

786

00:38:10,940 --> 00:38:08,670

every once in a while they seem to see a

787

00:38:12,319 --> 00:38:10,950

large cat that they reckon is in the

788

00:38:14,440 --> 00:38:12,329

bush land of Australia do you think we

789

00:38:16,160 --> 00:38:14,450

actually that could be an escaped

790

00:38:18,470 --> 00:38:16,170

non-natural one what do you think we've

791

00:38:19,729 --> 00:38:18,480

got an undocumented large cat wandering

792

00:38:22,279 --> 00:38:19,739

around out there people keep reckoning

793

00:38:26,420 --> 00:38:22,289

they see me once in a while well that's

794

00:38:28,880 --> 00:38:26,430

a great question i guess some i guess

795

00:38:30,499 --> 00:38:28,890

the geneticist in me is probably a

796

00:38:35,390 --> 00:38:30,509

little bit skeptical about that because

797

00:38:36,769 --> 00:38:35,400

it would probably would prefer okay not

798

00:38:39,979 --> 00:38:36,779

saying anything controversial here i

799

00:38:42,769 --> 00:38:39,989

shall proceed know that i think it would

800

00:38:47,380 --> 00:38:42,779

take quite a quite a large you know a

801  
00:38:50,479 --> 00:38:47,390  
reasonable population to to sustain a

802  
00:38:53,299 --> 00:38:50,489  
species of large cats especially over

803  
00:38:55,900 --> 00:38:53,309  
the time scales that we've over which

804  
00:38:58,670 --> 00:38:55,910  
they've been reported and it seems like

805  
00:39:00,349 --> 00:38:58,680  
it would be hard to sustain that that

806  
00:39:02,319 --> 00:39:00,359  
they'd be quite conspicuous if there

807  
00:39:06,559 --> 00:39:02,329  
were enough of them to have a viable

808  
00:39:10,130 --> 00:39:06,569  
population out there yeah so I guess I

809  
00:39:12,079 --> 00:39:10,140  
don't put a lot of stock in the alien do

810  
00:39:14,239 --> 00:39:12,089  
you think there might be a tasmanian

811  
00:39:15,950 --> 00:39:14,249  
tiger a very very very tiny population

812  
00:39:17,870 --> 00:39:15,960  
of them hanging out somewhere in

813  
00:39:21,440 --> 00:39:17,880

Tasmania because it gets pretty remote

814

00:39:23,690 --> 00:39:21,450

there it does get remote there I I don't

815

00:39:27,170 --> 00:39:23,700

have a strong opinion on that but again

816

00:39:30,829 --> 00:39:27,180

that I'm sufficiently convinced that the

817

00:39:32,690 --> 00:39:30,839

Tasmanian tiger is extinct that it's an

818

00:39:36,049 --> 00:39:32,700

important reminder that that once it's

819

00:39:37,579 --> 00:39:36,059

gone it's gone and so I feel like I'm

820

00:39:40,880 --> 00:39:37,589

sufficiently convinced that it is

821

00:39:44,359 --> 00:39:40,890

extinct to to use it as a cautionary

822

00:39:47,599 --> 00:39:44,369

note and as an indication to us that we

823

00:39:50,089 --> 00:39:47,609

need to be careful with them the these

824

00:39:52,190 --> 00:39:50,099

amazing species that share Australia

825

00:39:54,200 --> 00:39:52,200

with us well look up welcome here to the

826  
00:39:55,400 --> 00:39:54,210  
skeptics am getting really sciency here

827  
00:39:57,529 --> 00:39:55,410  
I'm talking to someone who really knows

828  
00:39:59,749 --> 00:39:57,539  
their stuff I'm talking to a little

829  
00:40:01,279 --> 00:39:59,759  
doctor murdered co-receptor oh you

830  
00:40:03,650 --> 00:40:01,289  
southern on ordinate tell him what are

831  
00:40:05,420 --> 00:40:03,660  
you I'm central Italian from roms oh wow

832  
00:40:07,910 --> 00:40:05,430  
no mucking about they're making about

833  
00:40:09,349 --> 00:40:07,920  
yeah well actually before we go any

834  
00:40:10,910 --> 00:40:09,359  
further what is your favorite Italian

835  
00:40:13,519 --> 00:40:10,920  
dish because every Italian has feels

836  
00:40:15,829 --> 00:40:13,529  
very you almost have a fanaticism about

837  
00:40:18,680 --> 00:40:15,839  
food to keep the traditional asset pizza

838  
00:40:20,839 --> 00:40:18,690

yeah italian-style pizza ah which means

839

00:40:22,819 --> 00:40:20,849

done properly done properly yes none

840

00:40:26,989 --> 00:40:22,829

that Chicago style stuff none of it

841

00:40:28,819 --> 00:40:26,999

pineapple now what drew you to getting

842

00:40:30,259 --> 00:40:28,829

your doctorate in what you did

843

00:40:32,120 --> 00:40:30,269

originally why did you decide to

844

00:40:35,390 --> 00:40:32,130

specialize in that because it's a lot of

845

00:40:37,789 --> 00:40:35,400

user uni well I was also interested in

846

00:40:40,640 --> 00:40:37,799

in plant conservation and at the time

847

00:40:43,579 --> 00:40:40,650

when I was doing my doctorate genetics

848

00:40:45,740 --> 00:40:43,589

which is a study of DNA was really

849

00:40:48,710 --> 00:40:45,750

coming to the fore and there was no one

850

00:40:50,930 --> 00:40:48,720

very few people doing what we know now

851  
00:40:52,520 --> 00:40:50,940  
is conservation genetics that is look at

852  
00:40:55,790 --> 00:40:52,530  
the distribution of genetic diversity

853  
00:41:00,110 --> 00:40:55,800  
across at that time rare species I was

854  
00:41:02,300 --> 00:41:00,120  
working with rare species and I can

855  
00:41:03,890 --> 00:41:02,310  
appreciate it there and then that it was

856  
00:41:05,810 --> 00:41:03,900  
really critical information because we

857  
00:41:07,430 --> 00:41:05,820  
can learn a lot from the from the DNA of

858  
00:41:10,100 --> 00:41:07,440  
species we can learn about the dynamics

859  
00:41:13,190 --> 00:41:10,110  
we can learn about the history we can

860  
00:41:16,610 --> 00:41:13,200  
see how much they really are threatened

861  
00:41:18,740 --> 00:41:16,620  
because their evolutionary background

862  
00:41:21,590 --> 00:41:18,750  
has been eroded so much that really they

863  
00:41:23,510 --> 00:41:21,600

are much more susceptible to change and

864

00:41:25,130 --> 00:41:23,520

with the area you're dealing with which

865

00:41:27,290 --> 00:41:25,140

is at New South Wales of Australia what

866

00:41:28,820 --> 00:41:27,300

is one of the rare plant species that

867

00:41:32,120 --> 00:41:28,830

you would be glad to come across will

868

00:41:34,100 --> 00:41:32,130

find here well the one that we've done

869

00:41:36,400 --> 00:41:34,110

quite a bit of work with and it's been

870

00:41:38,330 --> 00:41:36,410

fun to work with is the wall I'm a pine

871

00:41:41,810 --> 00:41:38,340

the one I'm apart is particularly

872

00:41:44,780 --> 00:41:41,820

interesting because we initially thought

873

00:41:47,360 --> 00:41:44,790

that there was no genetic diversity at

874

00:41:50,440 --> 00:41:47,370

all across the four remaining

875

00:41:54,620 --> 00:41:50,450

populations but using some of the most

876

00:41:56,900 --> 00:41:54,630

modern and advanced DNA technologies we

877

00:41:59,330 --> 00:41:56,910

were actually able to find some genetic

878

00:42:03,080 --> 00:41:59,340

diversity now that doesn't might not

879

00:42:05,870 --> 00:42:03,090

seem as very important but we are now

880

00:42:08,600 --> 00:42:05,880

moving to the next phase where we are

881

00:42:11,090 --> 00:42:08,610

going to look at the single genes the

882

00:42:13,820 --> 00:42:11,100

single genes of these species and that

883

00:42:15,320 --> 00:42:13,830

will kinda tell us it's not not only so

884

00:42:17,480 --> 00:42:15,330

much maybe about looking at what's

885

00:42:19,670 --> 00:42:17,490

missing but maybe looking at what makes

886

00:42:21,740 --> 00:42:19,680

these species with such a low genetic

887

00:42:24,170 --> 00:42:21,750

background evolution background still

888

00:42:25,880 --> 00:42:24,180

survive do you think it's sort of

889

00:42:27,170 --> 00:42:25,890

evolutions got it to the point where it

890

00:42:28,730 --> 00:42:27,180

doesn't need a lot of diversity because

891

00:42:31,430 --> 00:42:28,740

it's almost perfected itself in its

892

00:42:35,690 --> 00:42:31,440

environment and there can be some of

893

00:42:37,940 --> 00:42:35,700

that and an example of that are what we

894

00:42:40,850 --> 00:42:37,950

know in evolutionary terms as Island

895

00:42:43,970 --> 00:42:40,860

radiation so when a small number of

896

00:42:46,130 --> 00:42:43,980

individuals end up on an island this

897

00:42:50,000 --> 00:42:46,140

valve on that island and then they

898

00:42:52,520 --> 00:42:50,010

speciated so different species all ready

899

00:42:54,070 --> 00:42:52,530

for them to be able to survive on that

900

00:42:56,660 --> 00:42:54,080

island as a small number of individuals

901  
00:42:59,599 --> 00:42:56,670  
it means that there

902  
00:43:02,859 --> 00:42:59,609  
particularly fit so in a way it may be

903  
00:43:05,870 --> 00:43:02,869  
more than having all sorts of different

904  
00:43:07,880 --> 00:43:05,880  
options of it to them more importantly

905  
00:43:12,049 --> 00:43:07,890  
it means that they have very few of

906  
00:43:14,150 --> 00:43:12,059  
those nasty alleles there could cause

907  
00:43:16,220 --> 00:43:14,160  
reduce your fitness like inbreeding we

908  
00:43:18,140 --> 00:43:16,230  
know we know what happens when you know

909  
00:43:19,579 --> 00:43:18,150  
there's a village with everybody's

910  
00:43:21,440 --> 00:43:19,589  
related to each other everybody's got

911  
00:43:23,960 --> 00:43:21,450  
the same surname anna is not a very good

912  
00:43:25,579 --> 00:43:23,970  
thing right but in some cases just

913  
00:43:27,410 --> 00:43:25,589

happen at those few individuals get to

914

00:43:29,650 --> 00:43:27,420

the island didn't have any of those

915

00:43:32,930 --> 00:43:29,660

nasty genes and so they can survive

916

00:43:34,579 --> 00:43:32,940

accumulate diversity with time and then

917

00:43:37,549 --> 00:43:34,589

radiate into different species in

918

00:43:40,789 --> 00:43:37,559

different forms often when we put the

919

00:43:44,210 --> 00:43:40,799

two words plant and DNA together GMOs

920

00:43:46,579 --> 00:43:44,220

come to mind and Franken plant and Frank

921

00:43:48,200 --> 00:43:46,589

analytical Frank Reagan Bush people

922

00:43:49,490 --> 00:43:48,210

worry about Frank and bush Frank and

923

00:43:50,660 --> 00:43:49,500

bush and all this kind of thing no

924

00:43:53,030 --> 00:43:50,670

that's not that's not what we're about

925

00:43:54,980 --> 00:43:53,040

really about about obtaining the

926  
00:43:56,920 --> 00:43:54,990  
information interpret it and then making

927  
00:43:59,180 --> 00:43:56,930  
it available to the general public

928  
00:44:01,720 --> 00:43:59,190  
shawnee why do you think people get so

929  
00:44:03,770 --> 00:44:01,730  
alarmed about that as even actual

930  
00:44:05,450 --> 00:44:03,780  
manipulation like is being done is

931  
00:44:10,690 --> 00:44:05,460  
pretty much what happens naturally

932  
00:44:12,530 --> 00:44:10,700  
anyway it is I I think I think most of

933  
00:44:14,750 --> 00:44:12,540  
Industry and age people that do

934  
00:44:19,250 --> 00:44:14,760  
understand about this natural evolution

935  
00:44:21,410 --> 00:44:19,260  
process or the standard ways of breeding

936  
00:44:23,660 --> 00:44:21,420  
did you understand that the issue is not

937  
00:44:27,020 --> 00:44:23,670  
with with the genetic manipulation but

938  
00:44:30,079 --> 00:44:27,030

it tends to me be more with that the

939

00:44:32,630 --> 00:44:30,089

companies that said manipulate the

940

00:44:35,420 --> 00:44:32,640

plants for their own benefits or they

941

00:44:38,660 --> 00:44:35,430

make it resistant to a specific beside

942

00:44:39,890 --> 00:44:38,670

that they produce yeah so look again it

943

00:44:41,870 --> 00:44:39,900

seems to be people don't have a problem

944

00:44:44,120 --> 00:44:41,880

with the science it's more like the the

945

00:44:47,390 --> 00:44:44,130

business end of it yeah I think that's

946

00:44:49,190 --> 00:44:47,400

that's that's what it is okay well I'm

947

00:44:51,470 --> 00:44:49,200

here with the the last two members of

948

00:44:54,799 --> 00:44:51,480

the restore and renew project Matalin

949

00:44:56,450 --> 00:44:54,809

for nomera and Hannah McPherson now what

950

00:44:57,770 --> 00:44:56,460

are your air is the project you're

951  
00:45:00,349 --> 00:44:57,780  
dealing with what what are you doing for

952  
00:45:02,960 --> 00:45:00,359  
the project I mainly look at species

953  
00:45:05,870 --> 00:45:02,970  
distributions and try to work on way to

954  
00:45:08,150 --> 00:45:05,880  
collect from and how to and what each

955  
00:45:09,100 --> 00:45:08,160  
species sort of interesting facts about

956  
00:45:11,530 --> 00:45:09,110  
it and they

957  
00:45:14,950 --> 00:45:11,540  
once we have all the information the

958  
00:45:16,960 --> 00:45:14,960  
genetic information I try to interpret

959  
00:45:20,980 --> 00:45:16,970  
the genetic information nation with this

960  
00:45:22,680 --> 00:45:20,990  
other information along with it mmm okay

961  
00:45:26,350 --> 00:45:22,690  
and what what's your part of the project

962  
00:45:28,900 --> 00:45:26,360  
I guess I come in at various points as a

963  
00:45:31,750 --> 00:45:28,910

bit of other logistics kind of helper so

964

00:45:35,950 --> 00:45:31,760

trying to help deal with all the samples

965

00:45:38,290 --> 00:45:35,960

that we have coming in and and some of

966

00:45:40,180 --> 00:45:38,300

the processes to keep information and

967

00:45:42,280 --> 00:45:40,190

samples tracking together through the

968

00:45:44,110 --> 00:45:42,290

whole process you know you're dealing

969

00:45:45,640 --> 00:45:44,120

with 200 plants to start with what's the

970

00:45:47,650 --> 00:45:45,650

most obscure when you're dealing whether

971

00:45:50,770 --> 00:45:47,660

you think the most obscure the 200

972

00:45:52,840 --> 00:45:50,780

currently we've just got information for

973

00:45:55,360 --> 00:45:52,850

a plant called *Plectranthus parva*

974

00:45:57,910 --> 00:45:55,370

florists don't cool name but what's it

975

00:45:59,500 --> 00:45:57,920

what's it do well we didn't know what it

976  
00:46:02,140 --> 00:45:59,510  
was doing until we got the information

977  
00:46:05,800 --> 00:46:02,150  
the genetic data and we realized this

978  
00:46:07,840 --> 00:46:05,810  
plant cell fertilizes oh so does that

979  
00:46:09,700 --> 00:46:07,850  
mean hanging that mean it's a sexual

980  
00:46:13,390 --> 00:46:09,710  
heavy-headed we describe it yeah test

981  
00:46:15,400 --> 00:46:13,400  
sex with itself okay oh okay but and so

982  
00:46:17,350 --> 00:46:15,410  
why don't we see a lot of it then if it

983  
00:46:20,100 --> 00:46:17,360  
doesn't need an extra 1-2 yeah it should

984  
00:46:24,580 --> 00:46:20,110  
you be going off like nuts I don't like

985  
00:46:27,370 --> 00:46:24,590  
it's it still go it's still out crosses

986  
00:46:29,890 --> 00:46:27,380  
as well but much less than we thought so

987  
00:46:32,050 --> 00:46:29,900  
we do see a lot of this plant it's very

988  
00:46:34,720 --> 00:46:32,060

common it's not something particularly

989

00:46:37,360 --> 00:46:34,730

pretty it does make her beautiful blue

990

00:46:40,060 --> 00:46:37,370

and purple flowers perfect blue is kind

991

00:46:42,880 --> 00:46:40,070

of rare yeah the blue is kind of nice as

992

00:46:44,470 --> 00:46:42,890

well but the blue nyan they hired a bit

993

00:46:45,910 --> 00:46:44,480

so I guess I said so what sort of

994

00:46:47,470 --> 00:46:45,920

environment do they like they're like

995

00:46:50,110 --> 00:46:47,480

sort of under rocks they like shade

996

00:46:52,240 --> 00:46:50,120

where do they get into rocky rocky

997

00:46:55,060 --> 00:46:52,250

shades along kuraki shades along creeks

998

00:46:59,020 --> 00:46:55,070

um often you actually find them along

999

00:47:00,850 --> 00:46:59,030

roads yeah it also clone it makes clones

1000

00:47:02,920 --> 00:47:00,860

of itself in addition to sell

1001  
00:47:04,720 --> 00:47:02,930  
fertilizing you can also just break a

1002  
00:47:08,920 --> 00:47:04,730  
bit off and plant it on me and it will

1003  
00:47:12,070 --> 00:47:08,930  
grow I'm so it's very commonly used in

1004  
00:47:13,570 --> 00:47:12,080  
restoration work and we still wonder why

1005  
00:47:16,660 --> 00:47:13,580  
does it still make these pretty flowers

1006  
00:47:18,700 --> 00:47:16,670  
if itself fertilizers so there's

1007  
00:47:19,990 --> 00:47:18,710  
something more to it still then what we

1008  
00:47:21,700 --> 00:47:20,000  
know at the moment it's still only

1009  
00:47:22,250 --> 00:47:21,710  
halfway along its evolutionary journey

1010  
00:47:23,600 --> 00:47:22,260  
like it

1011  
00:47:26,930 --> 00:47:23,610  
figured to get rid of the flowers yet

1012  
00:47:28,040 --> 00:47:26,940  
maybe maybe yeah I think it's um that's

1013  
00:47:29,480 --> 00:47:28,050

one of the interesting things about

1014

00:47:30,950 --> 00:47:29,490

restore and renew is that we have to

1015

00:47:33,170 --> 00:47:30,960

sort of bring together all these

1016

00:47:35,570 --> 00:47:33,180

different bits of information like what

1017

00:47:37,760 --> 00:47:35,580

what fertilizes this thing how is it

1018

00:47:39,920 --> 00:47:37,770

pollinated all these different things or

1019

00:47:42,200 --> 00:47:39,930

is it even or does it what does it do

1020

00:47:44,570 --> 00:47:42,210

with itself like it's all these

1021

00:47:46,040 --> 00:47:44,580

different biological processes that we

1022

00:47:48,170 --> 00:47:46,050

have to consider when we're also looking

1023

00:47:49,340 --> 00:47:48,180

at the DNA and trying to try and

1024

00:47:51,710 --> 00:47:49,350

understand the patterns that we see

1025

00:47:52,790 --> 00:47:51,720

across the landscape we have a lot of

1026

00:47:54,740 --> 00:47:52,800

listeners to the show that are in

1027

00:47:56,420 --> 00:47:54,750

tertiary education are about to go into

1028

00:47:58,730 --> 00:47:56,430

tertiary education why would you

1029

00:48:00,440 --> 00:47:58,740

recommend your particular field of study

1030

00:48:02,540 --> 00:48:00,450

to someone who is going into uni rather

1031

00:48:04,580 --> 00:48:02,550

than another field why do you recommend

1032

00:48:07,030 --> 00:48:04,590

it what attracted you to it and why do

1033

00:48:09,500 --> 00:48:07,040

you think it's a good one to study

1034

00:48:11,570 --> 00:48:09,510

plants are really important we can't

1035

00:48:15,470 --> 00:48:11,580

live without them they clean the air

1036

00:48:17,840 --> 00:48:15,480

they make food and they beautiful and

1037

00:48:19,520 --> 00:48:17,850

every God has an interesting story I

1038

00:48:21,590 --> 00:48:19,530

look upset I've said on the show before

1039

00:48:24,080 --> 00:48:21,600

big family Western Australian pitcher

1040

00:48:25,250 --> 00:48:24,090

plant it's a coniferous plant stop love

1041

00:48:26,870 --> 00:48:25,260

it I've never been able to grow one

1042

00:48:28,490 --> 00:48:26,880

because the soil here is nothing like

1043

00:48:30,470 --> 00:48:28,500

Western Australia and it like swampy

1044

00:48:33,200 --> 00:48:30,480

soil I can't do that but what's your

1045

00:48:34,790 --> 00:48:33,210

favorite plant I don't have a favorite

1046

00:48:36,380 --> 00:48:34,800

player that's good see that's a

1047

00:48:37,670 --> 00:48:36,390

politically a good answer to make you

1048

00:48:40,820 --> 00:48:37,680

done with other plants will be ringing

1049

00:48:42,800 --> 00:48:40,830

up and getting upset we've got over 200

1050

00:48:44,840 --> 00:48:42,810

species and they restored a new species

1051

00:48:47,360 --> 00:48:44,850

list and I can't pick one I like them

1052

00:48:50,030 --> 00:48:47,370

all i also like many of the plants not

1053

00:48:52,040 --> 00:48:50,040

on the list as well oh okay if so how in

1054

00:48:54,590 --> 00:48:52,050

the field you preserve the DNA quickly

1055

00:48:56,360 --> 00:48:54,600

is it a freeze drying process do you do

1056

00:48:57,680 --> 00:48:56,370

yeah just free thought you're all you

1057

00:49:00,170 --> 00:48:57,690

actually physically freeze them what you

1058

00:49:02,150 --> 00:49:00,180

do so we take it s keys with ice and and

1059

00:49:04,130 --> 00:49:02,160

as soon as we pluck the leaves we put

1060

00:49:07,520 --> 00:49:04,140

them on ice and then we race back to

1061

00:49:10,070 --> 00:49:07,530

work and or if we're out in the field we

1062

00:49:13,400 --> 00:49:10,080

express post them back and then freeze

1063

00:49:15,140 --> 00:49:13,410

dry them and then once they're free

1064

00:49:19,370 --> 00:49:15,150

stride we could store them with silica

1065

00:49:21,140 --> 00:49:19,380

gel so they stay dry and like the final

1066

00:49:22,520 --> 00:49:21,150

questions here I'd like to ask you both

1067

00:49:24,350 --> 00:49:22,530

because you like getting out in the bush

1068

00:49:25,760 --> 00:49:24,360

I'd like recommended spots where people

1069

00:49:27,380 --> 00:49:25,770

can go that they don't normally get to

1070

00:49:28,580 --> 00:49:27,390

have you got a spot you'd recommend for

1071

00:49:31,310 --> 00:49:28,590

people to have a look at the amount of

1072

00:49:33,980 --> 00:49:31,320

thought going to I think close to Sydney

1073

00:49:35,470 --> 00:49:33,990

people could go up to the Blue Mountains

1074

00:49:37,690 --> 00:49:35,480

National Park Glee

1075

00:49:40,810 --> 00:49:37,700

brooke entrance there's a beautiful

1076  
00:49:42,580 --> 00:49:40,820  
swimming pool the Kelly pool pool and it

1077  
00:49:45,490 --> 00:49:42,590  
wonderful place to go never swim that's

1078  
00:49:48,130 --> 00:49:45,500  
good and you out and about it just last

1079  
00:49:49,810 --> 00:49:48,140  
weekend what would you recommend i just

1080  
00:49:51,970 --> 00:49:49,820  
went camping at wollondilly river and it

1081  
00:49:54,400 --> 00:49:51,980  
was just magic and so close to Sydney

1082  
00:49:56,140 --> 00:49:54,410  
really good okay well people listen to

1083  
00:49:58,570 --> 00:49:56,150  
keep an ear on eye on this and look

1084  
00:50:00,070 --> 00:49:58,580  
online for the restore and renew project

1085  
00:50:01,420 --> 00:50:00,080  
it's going to go for at least four years

1086  
00:50:09,480 --> 00:50:01,430  
but I think you got a lot more work

1087  
00:50:09,490 --> 00:50:18,719  
[Music]

1088  
00:50:25,689 --> 00:50:22,149

and now a special note for fans of

1089

00:50:29,309 --> 00:50:25,699

maynard at maynard calm today you you

1090

00:50:31,899 --> 00:50:29,319

can download your FREE maynard calendar

1091

00:50:35,649 --> 00:50:31,909

download print out whack on the wall

1092

00:50:38,079 --> 00:50:35,659

spend 2017 with me not for your free

1093

00:50:39,880 --> 00:50:38,089

calendar no strings attached well you'll

1094

00:50:45,610 --> 00:50:39,890

have to attach some strings to put it on

1095

00:51:03,230 --> 00:50:45,620

the wall head for WWE not calm a you

1096

00:51:07,740 --> 00:51:05,789

thank you for listening to the skeptic

1097

00:51:10,440 --> 00:51:07,750

zone on next week's show a special

1098

00:51:13,349 --> 00:51:10,450

report from Maynard at skeptics in the

1099

00:51:14,910 --> 00:51:13,359

pub which we had the other night here in

1100

00:51:18,990 --> 00:51:14,920

Sydney where may not ask the big

1101  
00:51:22,440 --> 00:51:19,000  
question about pub goes he finds out he

1102  
00:51:24,779 --> 00:51:22,450  
asks what do you know about witches and

1103  
00:51:26,700 --> 00:51:24,789  
witchcraft because last week on the show

1104  
00:51:29,130 --> 00:51:26,710  
we had the reading of a magic spell

1105  
00:51:30,779 --> 00:51:29,140  
against Donald Trump I noticed Donald

1106  
00:51:33,059 --> 00:51:30,789  
Trump still there so I guess the magic

1107  
00:51:35,599 --> 00:51:33,069  
spell didn't work I didn't think it

1108  
00:51:38,220 --> 00:51:35,609  
would but anyway Maynard wants to know

1109  
00:51:39,539 --> 00:51:38,230  
what do people think about witches or

1110  
00:51:42,690 --> 00:51:39,549  
more importantly what is their

1111  
00:51:45,420 --> 00:51:42,700  
understanding of witches and witchcraft

1112  
00:51:48,870 --> 00:51:45,430  
is at all comic stuff do they ride

1113  
00:51:50,910 --> 00:51:48,880

broomsticks to have familiars we'll find

1114

00:51:53,430 --> 00:51:50,920

out what Sydney pub goers think next

1115

00:51:55,470 --> 00:51:53,440

week a big thank you to all those people

1116

00:51:58,170 --> 00:51:55,480

who helped make the show possible and

1117

00:52:01,529 --> 00:51:58,180

not only my show but main art as well at

1118

00:52:05,789 --> 00:52:01,539

Maynard com delay you by chipping in for

1119

00:52:08,160 --> 00:52:05,799

patreon more paypal it it makes all the

1120

00:52:10,319 --> 00:52:08,170

difference it simply is the difference

1121

00:52:13,589 --> 00:52:10,329

between having a show or not having a

1122

00:52:16,529 --> 00:52:13,599

show so if you enjoy the skeptic zone if

1123

00:52:18,930 --> 00:52:16,539

you enjoy these other podcasts too then

1124

00:52:21,390 --> 00:52:18,940

why not give back a little bit chip in

1125

00:52:23,789 --> 00:52:21,400

it can be as little as a dollar a week

1126

00:52:25,650 --> 00:52:23,799

or even less or five dollars a week you

1127

00:52:29,329 --> 00:52:25,660

won't notice that money gone at all it's

1128

00:52:32,940 --> 00:52:29,339

a couple of cups of coffee at most but

1129

00:52:36,029 --> 00:52:32,950

collectively it means that shows like

1130

00:52:38,759 --> 00:52:36,039

the skeptics owned and maynards podcast

1131

00:52:41,039 --> 00:52:38,769

keep going it's as simple as that and we

1132

00:52:43,049 --> 00:52:41,049

thank you but for this week with the

1133

00:52:46,049 --> 00:52:43,059

rain once again falling down outside my

1134

00:52:51,410 --> 00:52:46,059

window this is Richard Saunders signing

1135

00:52:57,600 --> 00:52:53,850

you've been listening to the skeptics

1136

00:53:00,510 --> 00:52:57,610

own podcast visit our website at wwc a

1137

00:53:03,960 --> 00:53:00,520

petting zoo TV for contacts an archive

1138

00:53:06,660 --> 00:53:03,970

of all episodes since 2008 and our

1139

00:53:08,570 --> 00:53:06,670

online store please support the skeptic

1140

00:53:11,730 --> 00:53:08,580

zone by following us on twitter at

1141

00:53:15,359 --> 00:53:11,740

skeptic zone liking us on facebook and

1142

00:53:17,550 --> 00:53:15,369

leaving a review on iTunes you can also

1143

00:53:20,720 --> 00:53:17,560

show your support by subscribing via

1144

00:53:23,490 --> 00:53:20,730

paypal for as little as 99 cents a week

1145

00:53:25,140 --> 00:53:23,500

the skeptic zone is an independent

1146

00:53:27,570 --> 00:53:25,150

production the views and opinions

1147

00:53:29,190 --> 00:53:27,580

expressed on the skeptic zone and not

1148

00:53:32,040 --> 00:53:29,200

necessarily those of australian

1149

00:53:54,720 --> 00:53:32,050

skeptical or any other skeptical

1150

00:53:57,570 --> 00:53:54,730

organization hello hi hello hello hell

1151  
00:54:01,080 --> 00:53:57,580  
yeah I'm not too bad today and just have

1152  
00:54:05,180 --> 00:54:01,090  
to fiddle the levels here with this can

1153  
00:54:11,210 --> 00:54:05,190  
you just say count to 10 for me please I

1154  
00:54:22,200 --> 00:54:11,220  
don't know if I can do that 10 9 8 7 6

1155  
00:54:25,770 --> 00:54:22,210  
50 to 100 close enough you like me to

1156  
00:54:27,420 --> 00:54:25,780  
shut up no I just have to fiddle the

1157  
00:54:30,630 --> 00:54:27,430  
levels here you're coming through very

1158  
00:54:33,660 --> 00:54:30,640  
loud and clear alright so yes so we'll

1159  
00:54:38,220 --> 00:54:33,670  
just we'll just see how it goes in okie

1160  
00:54:45,030 --> 00:54:38,230  
dokie yeah only the listeners knew what

1161  
00:54:47,609 --> 00:54:45,040  
goes on when we're recording behind the

1162  
00:54:49,440 --> 00:54:47,619  
scenes alright are you ready up there um

1163  
00:54:50,920 --> 00:54:49,450

hang on let me just have a sip of tea

1164

00:54:57,400 --> 00:54:50,930

alright

1165

00:55:04,430 --> 00:55:02,720

do you mainly all right whole class and