

Palaeo News



Paul Willis

**A/Prof. Paul Willis on the
hunt for Dinosaurs**

**From
Episode #609 - 14 June 2020**



Richard Saunders

1
00:00:16,910 --> 00:00:14,000

[Music]

2
00:00:23,990 --> 00:00:16,920

[Applause]

3
00:00:29,400 --> 00:00:27,300

well folks I'm delighted to welcome to

4
00:00:31,380 --> 00:00:29,410

the skeptic zone a man I've known for

5
00:00:33,420 --> 00:00:31,390

many years almost two decades I think

6
00:00:35,400 --> 00:00:33,430

we've had some fun adventures together

7
00:00:36,090 --> 00:00:35,410

with Dinosaurs and skepticism and all

8
00:00:39,240 --> 00:00:36,100

sorts of things

9
00:00:41,640 --> 00:00:39,250

it's associate professor Paul Willis

10
00:00:42,810 --> 00:00:41,650

hello Paul get I Richard how you doing

11
00:00:44,700 --> 00:00:42,820

mate you know what

12
00:00:46,020 --> 00:00:44,710

during this crazy time of the the

13
00:00:48,840 --> 00:00:46,030

lockdown and the shut up and the get

14

00:00:50,280 --> 00:00:48,850

lost I'm not doing too bad I can't

15

00:00:51,990 --> 00:00:50,290

remember the last time I had a sniffle

16

00:00:54,840 --> 00:00:52,000

or a cold or a cough or anything like

17

00:00:56,220 --> 00:00:54,850

that yeah and might I say it looks like

18

00:00:58,849 --> 00:00:56,230

the pair of us are growing old

19

00:01:05,700 --> 00:00:58,859

disgracefully it's wonderful to see

20

00:01:08,550 --> 00:01:05,710

speak for yourself I can hear emit it

21

00:01:10,800 --> 00:01:08,560

where you may be in the past folks we've

22

00:01:13,410 --> 00:01:10,810

had some funny times Paul and I because

23

00:01:15,120 --> 00:01:13,420

occasionally Paul when you lived in

24

00:01:16,889 --> 00:01:15,130

Sydney we would be confused for each

25

00:01:20,190 --> 00:01:16,899

other I think when we both had darker

26

00:01:23,460 --> 00:01:20,200

hair yeah yeah when we were younger

27

00:01:25,560 --> 00:01:23,470

people I'm not sure who was whose

28

00:01:26,580 --> 00:01:25,570

doppelganger but we were mistaken on

29

00:01:29,370 --> 00:01:26,590

simple occasions

30

00:01:31,230 --> 00:01:29,380

well the strangest one to me was the

31

00:01:32,760 --> 00:01:31,240

phone rang here one day and I picked it

32

00:01:37,399 --> 00:01:32,770

up and I said hello and the voice on the

33

00:01:44,580 --> 00:01:40,730

that was this that was the strangest one

34

00:01:48,080 --> 00:01:44,590

Paul also known as paleo Paul let's talk

35

00:01:51,420 --> 00:01:48,090

about your latest series of videos and

36

00:01:53,719 --> 00:01:51,430

your outlets for what you love to do

37

00:01:56,819 --> 00:01:53,729

which is of course hunting for dinosaurs

38

00:02:00,899 --> 00:01:56,829

paleo pictures you've got a new weekly

39

00:02:04,230 --> 00:02:00,909

series with dinosaur news it's more a

40

00:02:06,929 --> 00:02:04,240

regular series or should I say irregular

41

00:02:10,620 --> 00:02:06,939

series as I get enough material together

42

00:02:14,280 --> 00:02:10,630

to put out an episode and then I'll put

43

00:02:16,800 --> 00:02:14,290

out an episode the I the idea is is look

44

00:02:20,009 --> 00:02:16,810

Crona virus and the whole lockdown

45

00:02:22,020 --> 00:02:20,019

really messed about with the whole

46

00:02:25,140 --> 00:02:22,030

business model for paleo pictures yeah

47

00:02:27,330 --> 00:02:25,150

we couldn't go out and get sponsors we

48

00:02:31,140 --> 00:02:27,340

couldn't go out and do filming we

49

00:02:36,440 --> 00:02:31,150

couldn't do anything so we more or less

50

00:02:41,449 --> 00:02:39,620

but then it dawned on me that even in

51
00:02:45,170 --> 00:02:41,459
hibernation there's still something we

52
00:02:48,530 --> 00:02:45,180
can do to build brand identity right and

53
00:02:52,250 --> 00:02:48,540
still building the presence of paleo

54
00:02:54,080 --> 00:02:52,260
pictures on the social media sites and

55
00:02:57,830 --> 00:02:54,090
we're getting a lot of traction

56
00:03:00,080 --> 00:02:57,840
particularly in Instagram and you know

57
00:03:03,140 --> 00:03:00,090
the contributions to social media

58
00:03:06,290 --> 00:03:03,150
actually consist of posting up stories

59
00:03:09,380 --> 00:03:06,300
from paleontology as they come to my

60
00:03:11,449 --> 00:03:09,390
attention and I thought well it's not

61
00:03:14,590 --> 00:03:11,459
going to be that much effort to be able

62
00:03:19,250 --> 00:03:14,600
to string a group of those together and

63
00:03:22,820 --> 00:03:19,260

put out a bulletin of paleo news hmm so

64

00:03:26,840 --> 00:03:22,830

that people can you know in in one short

65

00:03:28,670 --> 00:03:26,850

little podcast are able to catch up on

66

00:03:31,940 --> 00:03:28,680

the latest and greatest in paleontology

67

00:03:33,800 --> 00:03:31,950

of dinosaurs and fossils and stories

68

00:03:36,500 --> 00:03:33,810

from the past presented to you in the

69

00:03:39,199 --> 00:03:36,510

present it sounds pretty good I've been

70

00:03:41,990 --> 00:03:39,209

enjoying the episodes of putting up so

71

00:03:43,520 --> 00:03:42,000

far you've put up so far now let's talk

72

00:03:46,640 --> 00:03:43,530

about a few of the news items which

73

00:03:50,120 --> 00:03:46,650

really caught my attention a 100 year

74

00:03:51,259 --> 00:03:50,130

old now a 100 million year old I was

75

00:03:55,220 --> 00:03:51,269

gonna say I wouldn't bother with a

76
00:03:58,610 --> 00:03:55,230
hundred year old a 100 degree carbon

77
00:04:01,490 --> 00:03:58,620
dated it's too young it is it is well

78
00:04:03,530 --> 00:04:01,500
this one is bizarre like a lot of

79
00:04:08,060 --> 00:04:03,540
ancient creatures are to us a I guess a

80
00:04:11,740 --> 00:04:08,070
spider scorpion yeah yeah really weird

81
00:04:16,250 --> 00:04:11,750
creature this one and this one came from

82
00:04:20,750 --> 00:04:16,260
amber in Burma and this a deposit or

83
00:04:24,250 --> 00:04:20,760
Myanmar this amber deposit has just been

84
00:04:27,950 --> 00:04:24,260
producing stunning fossils including

85
00:04:31,010 --> 00:04:27,960
hatchling dinosaur birds and all sorts

86
00:04:34,040 --> 00:04:31,020
of weird things well complete geckos and

87
00:04:36,230 --> 00:04:34,050
what-have-you and one of the creatures

88
00:04:38,300 --> 00:04:36,240

that came out and is December's about

89

00:04:41,480 --> 00:04:38,310

100 million years old as you said yeah

90

00:04:45,680 --> 00:04:41,490

is and they've gotten multiple specimens

91

00:04:48,620 --> 00:04:45,690

of it is a what looks like a cross

92

00:04:52,520 --> 00:04:48,630

between a spider and a scorpion

93

00:04:56,030 --> 00:04:52,530

they are both in the same group and one

94

00:04:58,610 --> 00:04:56,040

evolve from the other and so you've got

95

00:05:02,440 --> 00:04:58,620

what looks like a sort of elongate

96

00:05:05,600 --> 00:05:02,450

spider with a long thin whip-like tail

97

00:05:08,390 --> 00:05:05,610

and these spider scorpions are thought

98

00:05:09,740 --> 00:05:08,400

to date back a couple of hundred million

99

00:05:13,670 --> 00:05:09,750

years prior

100

00:05:17,240 --> 00:05:13,680

so this fine so you know that that group

101
00:05:26,710 --> 00:05:17,250
probably goes back to about 300 million

102
00:05:34,190 --> 00:05:30,230
terrifying to look in the glorious

103
00:05:38,360 --> 00:05:34,200
detail of this creature and I think this

104
00:05:41,780 --> 00:05:38,370
this group of creatures or what-have-you

105
00:05:45,410 --> 00:05:41,790
were on the planet for such a huge

106
00:05:47,870 --> 00:05:45,420
length of time before being extinct or

107
00:05:50,240 --> 00:05:47,880
dying out or evolving or whatever but

108
00:05:52,580 --> 00:05:50,250
for countless eons there were spiders

109
00:05:55,280 --> 00:05:52,590
scorpions and creatures like them well

110
00:05:56,930 --> 00:05:55,290
exactly I mean in a sense you're talking

111
00:06:01,450 --> 00:05:56,940
about a missing link you're talking

112
00:06:05,360 --> 00:06:01,460
about a representative of a group that's

113
00:06:08,230 --> 00:06:05,370

not fully fledged spider it's not a

114

00:06:10,760 --> 00:06:08,240

fully fledged scorpion it is a

115

00:06:12,620 --> 00:06:10,770

representative of the transition between

116

00:06:14,210 --> 00:06:12,630

those two groups there's going to be a

117

00:06:16,130 --> 00:06:14,220

movie now someone's going to listen to

118

00:06:19,480 --> 00:06:16,140

this and say oh the next movie is going

119

00:06:21,770 --> 00:06:19,490

to be the spider scorpion movie yeah

120

00:06:25,040 --> 00:06:21,780

even better because it's preserved in

121

00:06:28,420 --> 00:06:25,050

amber some some clueless person will

122

00:06:31,790 --> 00:06:28,430

want to reconstruct it from the DNA and

123

00:06:33,710 --> 00:06:31,800

probably confused the DNA with I don't

124

00:06:36,950 --> 00:06:33,720

know elephant DNA or something so we end

125

00:06:38,990 --> 00:06:36,960

up with a giant spider scorpion well

126
00:06:40,190 --> 00:06:39,000
having Jurassic Park lost a lot of

127
00:06:44,120 --> 00:06:40,200
opportunity they could have had

128
00:06:46,610 --> 00:06:44,130
creatures absolutely epoch seniors and

129
00:06:49,850 --> 00:06:46,620
what about a giant wombat drastic park

130
00:06:52,790 --> 00:06:49,860
let's have the join by speaking what

131
00:06:55,730 --> 00:06:52,800
like we're more likely to do that new

132
00:06:58,250 --> 00:06:55,740
cause we can actually get DNA in theory

133
00:07:01,300 --> 00:06:58,260
only we could get DNA either for the

134
00:07:02,780 --> 00:07:01,310
larger species of

135
00:07:06,380 --> 00:07:02,790
[Music]

136
00:07:08,420 --> 00:07:06,390
the Wombats that lived in the cup a

137
00:07:11,300 --> 00:07:08,430
couple of tens of thousands of years ago

138
00:07:13,190 --> 00:07:11,310

right or the group called the Diprotodon

139

00:07:15,680 --> 00:07:13,200

tidge which are often described as

140

00:07:16,490 --> 00:07:15,690

massive wombats the largest marsupials

141

00:07:18,590 --> 00:07:16,500

that have ever lived

142

00:07:22,640 --> 00:07:18,600

yeah I've seen the chance of getting DNA

143

00:07:24,350 --> 00:07:22,650

out of amber 101 years old is zero well

144

00:07:26,360 --> 00:07:24,360

I mean makes it makes the fun movies

145

00:07:28,490 --> 00:07:26,370

anyway when one of our reporters on the

146

00:07:30,230 --> 00:07:28,500

Skippy and Trish Hann one of her

147

00:07:33,230 --> 00:07:30,240

favorite movies is the original Jurassic

148

00:07:35,060 --> 00:07:33,240

Park and I saw it at her place about a

149

00:07:38,290 --> 00:07:35,070

year or two back and Wow it was a

150

00:07:41,990 --> 00:07:38,300

fabulous nostalgia trip yeah yeah really

151
00:07:45,910 --> 00:07:42,000
and some of the wonderful mistakes in it

152
00:07:52,070 --> 00:07:45,920
I mean they misspelled Stegosaurus okay

153
00:07:56,090 --> 00:07:52,080
they they had a vile in the in when

154
00:08:00,650 --> 00:07:56,100
Nidre goes into steals the specimens of

155
00:08:02,800 --> 00:08:00,660
embryos one of the species of dinosaur

156
00:08:05,720 --> 00:08:02,810
is a thing I think it's Acrocanthosaurus

157
00:08:07,880 --> 00:08:05,730
hmm and at the time it was only known

158
00:08:10,220 --> 00:08:07,890
from a couple of lumbar vertebrae of an

159
00:08:14,020 --> 00:08:10,230
adult right so the only way you could

160
00:08:17,360 --> 00:08:14,030
identify the embryos of Acrocanthosaurus

161
00:08:20,330 --> 00:08:17,370
would be to grow unto a dolphin kill its

162
00:08:22,490 --> 00:08:20,340
drip it down and identify that the

163
00:08:27,980 --> 00:08:22,500

lumbar vertebrae were the same thing and

164

00:08:30,370 --> 00:08:27,990

then you could say yes that was boy

165

00:08:33,260 --> 00:08:30,380

you're spoiling that the movie magic

166

00:08:36,230 --> 00:08:33,270

technically speaking I'm not a pen no no

167

00:08:39,020 --> 00:08:36,240

no I know I understand I I love all

168

00:08:41,029 --> 00:08:39,030

those movies I put my brain on hold it's

169

00:08:44,690 --> 00:08:41,039

it's having is having a lot of fun but

170

00:08:46,370 --> 00:08:44,700

we're talking about ancient Australian

171

00:08:49,880 --> 00:08:46,380

animals here let's go even further back

172

00:08:52,400 --> 00:08:49,890

another news item that you covered in in

173

00:08:54,230 --> 00:08:52,410

the series was a discovery of a new

174

00:08:56,090 --> 00:08:54,240

dinosaur in Victoria which is

175

00:08:57,950 --> 00:08:56,100

particularly interesting when it links

176

00:09:00,079 --> 00:08:57,960

up to other dinosaur species in the

177

00:09:02,030 --> 00:09:00,089

southern hemisphere and amazingly enough

178

00:09:05,270 --> 00:09:02,040

this thing could have lived in the

179

00:09:08,030 --> 00:09:05,280

Arctic Circle yeah this is a one of the

180

00:09:10,460 --> 00:09:08,040

very the meat-eating dinosaurs you know

181

00:09:11,449 --> 00:09:10,470

when you say the theropods or the medium

182

00:09:13,550 --> 00:09:11,459

you know so everyone thinks that

183

00:09:15,160 --> 00:09:13,560

rhinoceros or Allosaurus you know the be

184

00:09:22,449 --> 00:09:15,170

the

185

00:09:25,780 --> 00:09:22,459

strange lineages and one of those

186

00:09:28,690 --> 00:09:25,790

strange lineages has just been

187

00:09:31,960 --> 00:09:28,700

identified from a neck bone found in

188

00:09:35,560 --> 00:09:31,970

Victoria again it's about 100 million

189

00:09:38,860 --> 00:09:35,570

years old and the only thing like it is

190

00:09:43,180 --> 00:09:38,870

from similar age deposits in Madagascar

191

00:09:45,730 --> 00:09:43,190

now at the time Australia was so far

192

00:09:47,710 --> 00:09:45,740

south that that site wouldn't that

193

00:09:51,069 --> 00:09:47,720

animal would have been living within the

194

00:09:53,949 --> 00:09:51,079

Antarctic Circle so you immediately

195

00:09:55,870 --> 00:09:53,959

we're learning a heck of a lot just

196

00:09:59,519 --> 00:09:55,880

simply by the finding and identification

197

00:10:05,139 --> 00:09:59,529

of that one single neck bone that this

198

00:10:09,460 --> 00:10:05,149

strange group of theropods were present

199

00:10:11,740 --> 00:10:09,470

across Gondwana the giant southern

200

00:10:16,410 --> 00:10:11,750

continent but also that they were living

201
00:10:19,480 --> 00:10:16,420
in environments that we don't expect

202
00:10:22,840 --> 00:10:19,490
many animals to be living in today yeah

203
00:10:26,860 --> 00:10:22,850
although it would have probably been

204
00:10:28,689 --> 00:10:26,870
warmer below the Antarctic Circle 100

205
00:10:32,680 --> 00:10:28,699
million years ago it wouldn't have been

206
00:10:35,050 --> 00:10:32,690
that much warmer it would still be

207
00:10:39,689 --> 00:10:35,060
pretty harsh conditions to make a living

208
00:10:43,120 --> 00:10:39,699
in so it really opens our whole

209
00:10:45,819 --> 00:10:43,130
understanding of the abilities of these

210
00:10:47,740 --> 00:10:45,829
creatures to live in a number of harsh

211
00:10:49,150 --> 00:10:47,750
environments now of course you know what

212
00:10:51,040 --> 00:10:49,160
you're talking about especially in this

213
00:10:52,689 --> 00:10:51,050

situation because you've been down to

214

00:10:55,900 --> 00:10:52,699

the Antarctic quite a few times

215

00:11:01,449 --> 00:10:55,910

yeah I've been down I think it's 11 time

216

00:11:05,230 --> 00:11:01,459

now I was a expert to a guide with

217

00:11:08,559 --> 00:11:05,240

Aurora expeditions specifically my job

218

00:11:10,300 --> 00:11:08,569

was to introduce the tourists to the

219

00:11:13,870 --> 00:11:10,310

fossil deposits on the Antarctic

220

00:11:15,970 --> 00:11:13,880

Peninsula and there are spectacular

221

00:11:18,000 --> 00:11:15,980

fossil deposits there because they

222

00:11:20,980 --> 00:11:18,010

haven't been picked over by people yeah

223

00:11:23,500 --> 00:11:20,990

anywhere else in the world if you've got

224

00:11:25,290 --> 00:11:23,510

well there's a couple of factors that

225

00:11:27,430 --> 00:11:25,300

are in your favor in Antarctica

226

00:11:28,660 --> 00:11:27,440

everywhere else in the world where there

227

00:11:30,550 --> 00:11:28,670

have been spectacular

228

00:11:34,720 --> 00:11:30,560

fossil deposits they because they're

229

00:11:36,370 --> 00:11:34,730

easier to get to and there's people

230

00:11:38,830 --> 00:11:36,380

around they many of them have been

231

00:11:41,890 --> 00:11:38,840

picked clean but also in Antarctica

232

00:11:44,620 --> 00:11:41,900

there's no soil there's no vegetation so

233

00:11:47,650 --> 00:11:44,630

you can see the bedrock in most places

234

00:11:51,600 --> 00:11:47,660

that you go to if there's no snow or ice

235

00:11:53,800 --> 00:11:51,610

and surprisingly large areas of the

236

00:11:55,450 --> 00:11:53,810

Antarctic Peninsula particularly on the

237

00:11:59,410 --> 00:11:55,460

eastern side where the fossils are a

238

00:12:02,500 --> 00:11:59,420

completely bare of snow and ice you see

239

00:12:05,740 --> 00:12:02,510

the bedrock you see the fossils and yeah

240

00:12:09,640 --> 00:12:05,750

it's and the icing on the cake is one

241

00:12:12,400 --> 00:12:09,650

set of deposits that produce fossils in

242

00:12:16,720 --> 00:12:12,410

Antarctica span the period of time

243

00:12:20,860 --> 00:12:16,730

dinosaurs disappeared the sequence of

244

00:12:25,180 --> 00:12:20,870

beds that date from about 70 million

245

00:12:28,720 --> 00:12:25,190

years down to about 55 million years ago

246

00:12:30,430 --> 00:12:28,730

that covers it and the extinction is

247

00:12:34,510 --> 00:12:30,440

almost slap bang in the middle of that

248

00:12:38,020 --> 00:12:34,520

material we're talking about 66 65 to 66

249

00:12:42,550 --> 00:12:38,030

yeah years ago 65.5 depends on the day

250

00:12:45,070 --> 00:12:42,560

of the week yeah but and there are

251

00:12:48,190 --> 00:12:45,080

places in Antarctica where you on

252

00:12:52,690 --> 00:12:48,200

Seymour Island where you can literally

253

00:12:55,090 --> 00:12:52,700

walk across an ancient seabed crammed

254

00:12:58,000 --> 00:12:55,100

full of fossils and then there's a line

255

00:13:01,240 --> 00:12:58,010

in the dirt and the fossils disappeared

256

00:13:04,630 --> 00:13:01,250

well and that line in the dirt is the KT

257

00:13:06,070 --> 00:13:04,640

extinction I keep I keep threatening to

258

00:13:08,110 --> 00:13:06,080

come with you on your next expedition

259

00:13:09,640 --> 00:13:08,120

I'm sure we can share a cabin Paul I'm

260

00:13:13,630 --> 00:13:09,650

sure that wouldn't be any problem yeah

261

00:13:17,470 --> 00:13:13,640

yeah I'm not sure how that whole venture

262

00:13:18,790 --> 00:13:17,480

is going to go post covert but it would

263

00:13:21,430 --> 00:13:18,800

be nice to get back down there

264

00:13:24,250 --> 00:13:21,440

finally finally some news about t-rex

265

00:13:26,470 --> 00:13:24,260

and the fact that the animal itself

266

00:13:30,490 --> 00:13:26,480

seemed to change quite a bit during it's

267

00:13:35,830 --> 00:13:30,500

like it's its own lifespan yeah we've

268

00:13:38,980 --> 00:13:35,840

known for some time that t-rex was quite

269

00:13:41,980 --> 00:13:38,990

different as a juvenile inform as to

270

00:13:45,100 --> 00:13:41,990

what it was like when it was an adult

271

00:13:47,380 --> 00:13:45,110

and this had been quantified into a

272

00:13:49,840 --> 00:13:47,390

growth curve a couple of times in the

273

00:13:52,650 --> 00:13:49,850

past but what happened and this was only

274

00:13:56,050 --> 00:13:52,660

last week that this was published eased

275

00:14:00,460 --> 00:13:56,060

some researchers went back and looked at

276
00:14:06,420 --> 00:14:00,470
all 44 specimens that are known for Tran

277
00:14:16,090 --> 00:14:12,269
1875 features of those specimens and

278
00:14:18,220 --> 00:14:16,100
then they plug that in to produce a

279
00:14:20,920 --> 00:14:18,230
growth curve so we know pretty

280
00:14:24,900 --> 00:14:20,930
accurately how long they lived when

281
00:14:28,000 --> 00:14:24,910
their growth spurts were the periods of

282
00:14:30,699 --> 00:14:28,010
of growth so you've got a juvenile

283
00:14:33,190 --> 00:14:30,709
you've got a sub-adult you've got an

284
00:14:36,790 --> 00:14:33,200
adult there's actually five periods of

285
00:14:40,360 --> 00:14:36,800
growth that they've identified and so we

286
00:14:44,380 --> 00:14:40,370
can actually track how these things

287
00:14:47,410 --> 00:14:44,390
changed as they grew and as a young

288
00:14:49,870 --> 00:14:47,420

creature they would have the most

289

00:14:53,680 --> 00:14:49,880

obvious differences were they would tend

290

00:14:57,250 --> 00:14:53,690

to have an arrow and and relatively

291

00:15:00,610 --> 00:14:57,260

shallow skull mm-hmm and as they got

292

00:15:04,210 --> 00:15:00,620

older the skull got deeper and broader

293

00:15:06,480 --> 00:15:04,220

and they lost teeth well that makes a

294

00:15:09,340 --> 00:15:06,490

number of teeth the number of teeth

295

00:15:12,550 --> 00:15:09,350

decreased as they went as they grew

296

00:15:15,220 --> 00:15:12,560

older there are other many other

297

00:15:17,740 --> 00:15:15,230

differences but you know the the fact

298

00:15:21,730 --> 00:15:17,750

that we've now got this really detailed

299

00:15:24,040 --> 00:15:21,740

report as to how trance or has changed

300

00:15:26,139 --> 00:15:24,050

throughout its life it's really an

301

00:15:29,590 --> 00:15:26,149

insight into their biology it's

302

00:15:32,710 --> 00:15:29,600

fascinating to do do we have a decent

303

00:15:36,220 --> 00:15:32,720

understanding of what a life expectancy

304

00:15:41,730 --> 00:15:36,230

for a t-rex would be at 28 years hmm

305

00:15:46,569 --> 00:15:41,740

about 28 years and most of the growth is

306

00:15:49,329 --> 00:15:46,579

concentrated into a period from about 1

307

00:15:55,449 --> 00:15:49,339

think it's about seven years old to

308

00:15:59,019 --> 00:15:55,459

about 15 you it's not as a constant flat

309

00:16:01,569 --> 00:15:59,029

line growth it's almost exponential and

310

00:16:03,489 --> 00:16:01,579

then it tapers off and that the main

311

00:16:06,519 --> 00:16:03,499

growth period is right in the middle

312

00:16:09,460 --> 00:16:06,529

there well so much to find out and folks

313

00:16:11,139 --> 00:16:09,470

the only reason I knew about this these

314

00:16:12,579 --> 00:16:11,149

items we've been discussing today's I

315

00:16:16,439 --> 00:16:12,589

took the time and I watched the first

316

00:16:19,030 --> 00:16:16,449

three episodes of paleo pictures the

317

00:16:21,999 --> 00:16:19,040

dinosaur the news updates the Dino

318

00:16:23,019 --> 00:16:22,009

updates the paleo updates paleo pictures

319

00:16:24,699 --> 00:16:23,029

news it's called

320

00:16:28,720 --> 00:16:24,709

where can people see that for themselves

321

00:16:33,579 --> 00:16:28,730

Paul we've got a YouTube channel just

322

00:16:37,350 --> 00:16:33,589

look up paleo news or paleo pictures and

323

00:16:42,639 --> 00:16:37,360

also we are putting them out as a

324

00:16:46,480 --> 00:16:42,649

Instagram TV series which you can view

325

00:16:48,249 --> 00:16:46,490

through Paleo pictures on Instagram and

326

00:16:54,489 --> 00:16:48,259

if I can just give a shout out because

327

00:16:58,139 --> 00:16:54,499

paleo pictures as a business yeah pretty

328

00:17:02,559 --> 00:16:58,149

unusual piece because not only are we a

329

00:17:05,919 --> 00:17:02,569

documentary production company but we

330

00:17:08,949 --> 00:17:05,929

also are a research company right and we

331

00:17:12,279 --> 00:17:08,959

aim to fund the research that we make

332

00:17:14,409 --> 00:17:12,289

the documentaries about it's a bit of an

333

00:17:16,149 --> 00:17:14,419

unusual beast and if it wasn't for a

334

00:17:18,490 --> 00:17:16,159

number of people in the skeptic

335

00:17:21,760 --> 00:17:18,500

community in Australia who came on board

336

00:17:24,819 --> 00:17:21,770

as shareholders really early on we

337

00:17:26,590 --> 00:17:24,829

wouldn't be where we are today so I'm

338

00:17:28,299 --> 00:17:26,600

not going to embarrass anyone by naming

339

00:17:31,480 --> 00:17:28,309

names but a big shout out to all of

340

00:17:34,210 --> 00:17:31,490

those guys who've got behind us and if

341

00:17:37,450 --> 00:17:34,220

anybody else is interested in supporting

342

00:17:41,710 --> 00:17:37,460

our activities we have got a patreon

343

00:17:46,029 --> 00:17:41,720

account right and if you want to support

344

00:17:48,100 --> 00:17:46,039

the future of paleontology and telling

345

00:17:50,769 --> 00:17:48,110

the world the wonders of the mysteries

346

00:17:53,019 --> 00:17:50,779

from the past then hop on to our patreon

347

00:17:55,810 --> 00:17:53,029

account and look at becoming a patreon a

348

00:17:58,090 --> 00:17:55,820

patron for paleo pictures folks you can

349

00:18:01,269 --> 00:17:58,100

support the future of the past how about

350

00:18:07,870 --> 00:18:01,279

that that's that's the message you like

351
00:18:09,100 --> 00:18:07,880
it you can have it Paul Willis associate

352
00:18:10,450 --> 00:18:09,110
professor Paul Willis

353
00:18:12,100 --> 00:18:10,460
always a pleasure to have you on the

354
00:18:14,169 --> 00:18:12,110
sceptic zone you've been up my guest on

355
00:18:16,180 --> 00:18:14,179
the show quite a few times you even have

356
00:18:18,640 --> 00:18:16,190
your own theme music which is quite an

357
00:18:21,760 --> 00:18:18,650
honor we look forward and I look forward

358
00:18:24,130 --> 00:18:21,770
especially myself to watching each new

359
00:18:25,840 --> 00:18:24,140
episode of paleo pictures news as it

360
00:18:26,410 --> 00:18:25,850
comes online but for now thank you very

361
00:18:28,940 --> 00:18:26,420
much

362
00:18:42,920 --> 00:18:28,950
always a pleasure Richard you take care

363
00:18:45,860 --> 00:18:42,930

[Music]