



PETER ALLEN

MASTODON VALLEY FARM, PERMACULTURE, & THE WILDERNESS MYTH

PRESENTED BY THE HIGHERSIDE CHATS



LISTEN TO THE EPISODE AT THEHIGHERSIDECHATS.COM

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1
00:00:03,980 --> 00:00:02,240
embrace yourself because you're about to

2
00:00:06,170 --> 00:00:03,990
dive into another free first hour

3
00:00:07,369 --> 00:00:06,180
episode of the higher side chats and we

4
00:00:08,780 --> 00:00:07,379
just want to let you know that whether

5
00:00:10,820 --> 00:00:08,790
you're looking for a companion through

6
00:00:12,350 --> 00:00:10,830
your paranoid insomnia entertaining

7
00:00:14,360 --> 00:00:12,360
yourself through one of life's mundane

8
00:00:16,070 --> 00:00:14,370
activities we're trying to ward off the

9
00:00:18,680 --> 00:00:16,080
internal screams of all those sad

10
00:00:20,420 --> 00:00:18,690
smothered Souls around the office THC is

11
00:00:22,099 --> 00:00:20,430
here and you should know that every

12
00:00:24,109 --> 00:00:22,109
episode of the higher side chats has an

13
00:00:26,509 --> 00:00:24,119

entire second hour four plus members

14

00:00:29,000 --> 00:00:26,519

sign up at the higher side chats plus

15

00:00:31,550 --> 00:00:29,010

calm and you get years of plus show

16

00:00:32,990 --> 00:00:31,560

archives lifetime forum access the

17

00:00:36,380 --> 00:00:33,000

special invite to greg carl woods

18

00:00:39,950 --> 00:00:36,390

monthly joint sessions mp3s of THC music

19

00:00:42,380 --> 00:00:39,960

bonus episodes for videos and 10% off

20

00:00:44,299 --> 00:00:42,390

t-shirts grinders and whatever else ends

21

00:00:46,279 --> 00:00:44,309

up in the higher side store it's eight

22

00:00:48,110 --> 00:00:46,289

dollars a month that you won't miss so

23

00:00:49,790 --> 00:00:48,120

become a plus member and treat yourself

24

00:00:52,069 --> 00:00:49,800

in these troubled times always

25

00:00:53,900 --> 00:00:52,079

action-packed and commercial free which

26

00:01:00,459 --> 00:00:53,910

means you'll unfortunately never hear my

27

00:01:05,740 --> 00:01:03,729

in the 1930s President Franklin Delano

28

00:01:08,289 --> 00:01:05,750

Roosevelt addressed the nation through a

29

00:01:11,230 --> 00:01:08,299

series of radio broadcast known as the

30

00:01:13,240 --> 00:01:11,240

fireside chats his aim was to reassure

31

00:01:15,010 --> 00:01:13,250

the common man that our society would

32

00:01:17,710 --> 00:01:15,020

recover from its troubled times

33

00:01:22,990 --> 00:01:17,720

well we're far from 1930 and I deal with

34

00:01:30,340 --> 00:01:23,000

a different kind of buyer a brush

35

00:01:32,320 --> 00:01:30,350

conversation I'm Carl wood back in the

36

00:01:34,419 --> 00:01:32,330

saddle and ready to ride dear people

37

00:01:36,310 --> 00:01:34,429

from sunny San Diego I'm Greg Carl wood

38

00:01:37,840 --> 00:01:36,320

and we have spent a lot of time talking

39

00:01:39,940 --> 00:01:37,850

about how we've been screwed by the

40

00:01:41,919 --> 00:01:39,950

system how our leaders have led us

41

00:01:44,499 --> 00:01:41,929

astray and just how backwards our

42

00:01:46,330 --> 00:01:44,509

current lifestyles really are we spend

43

00:01:48,279 --> 00:01:46,340

most of our time at jobs we can't stand

44

00:01:50,590 --> 00:01:48,289

just to get enough green paper to get us

45

00:01:52,690 --> 00:01:50,600

through another 30 days we spend most of

46

00:01:54,279 --> 00:01:52,700

it on cheap pre-made food because we

47

00:01:56,499 --> 00:01:54,289

lost the knowledge to cook for ourselves

48

00:01:58,570 --> 00:01:56,509

and some of us even pay for gym

49

00:02:01,389 --> 00:01:58,580

memberships to simulate the use of our

50

00:02:03,669 --> 00:02:01,399

body we used to just call living we grow

51
00:02:05,770 --> 00:02:03,679
in mow useless patches of grass instead

52
00:02:08,260 --> 00:02:05,780
of anything we could use or eat and we

53
00:02:10,389 --> 00:02:08,270
perpetuate the cycle of suckling at the

54
00:02:12,780 --> 00:02:10,399
teat of a tyrannical system out of

55
00:02:15,400 --> 00:02:12,790
ignorance convenience and complacency

56
00:02:17,350 --> 00:02:15,410
yes the puppet masters the Western world

57
00:02:19,300 --> 00:02:17,360
dangled that quarter pounder carrot in

58
00:02:21,880 --> 00:02:19,310
front of us and we wandered right into

59
00:02:23,920 --> 00:02:21,890
the trap of microwavable TV dinners pill

60
00:02:26,680 --> 00:02:23,930
popping and the hypnotic nightly news

61
00:02:27,790 --> 00:02:26,690
but it does take two to tango maybe we

62
00:02:29,830 --> 00:02:27,800
didn't ask for the rockefeller

63
00:02:31,809 --> 00:02:29,840

rothschild debt based system a rule but

64

00:02:33,430 --> 00:02:31,819

we definitely embraced it all with open

65

00:02:35,949 --> 00:02:33,440

arms and I think people are finally

66

00:02:38,080 --> 00:02:35,959

realizing how fascinating beneficial and

67

00:02:40,509 --> 00:02:38,090

downright magical our natural systems

68

00:02:42,460 --> 00:02:40,519

really are and the prospect of a pivot

69

00:02:43,479 --> 00:02:42,470

back to a simpler life is sounding

70

00:02:45,970 --> 00:02:43,489

better all the time

71

00:02:48,640 --> 00:02:45,980

so maybe it isn't as sexy as secret

72

00:02:50,979 --> 00:02:48,650

space programs in CIA mind control but

73

00:02:52,990 --> 00:02:50,989

permaculture a reintroduction to nature

74

00:02:55,150 --> 00:02:53,000

and the empowerment gained from shucking

75

00:02:57,070 --> 00:02:55,160

off the slave system are useful tools

76

00:02:59,199 --> 00:02:57,080

for the long game and I don't think they

77

00:03:00,940 --> 00:02:59,209

should be overlooked and I'm sure these

78

00:03:03,100 --> 00:03:00,950

feelings are shared by today's guest

79

00:03:05,559 --> 00:03:03,110

Peter Allen who is an ecologist turned

80

00:03:08,530 --> 00:03:05,569

farmer focused on restoring functional

81

00:03:10,990 --> 00:03:08,540

and productive Savannah ecosystems he

82

00:03:12,900 --> 00:03:11,000

owns and manages Mastodon Valley farm in

83

00:03:15,210 --> 00:03:12,910

southwest Wisconsin where he runs

84

00:03:17,580 --> 00:03:15,220

successful all-natural meat subscription

85

00:03:20,370 --> 00:03:17,590

business he also runs Savannah Gardens

86

00:03:22,710 --> 00:03:20,380

LLC an education and consulting company

87

00:03:24,780 --> 00:03:22,720

focused on permaculture restoration

88

00:03:27,360 --> 00:03:24,790

agriculture holistic planning and

89

00:03:29,190 --> 00:03:27,370

ecological design so let's stop bitching

90

00:03:31,950 --> 00:03:29,200

and start living the Land Management

91

00:03:34,170 --> 00:03:31,960

Magi oak savannah sage permaculture pimp

92

00:03:36,860 --> 00:03:34,180

and master of his Mastodon valley farm

93

00:03:39,630 --> 00:03:36,870

domain Peter welcome to the higher side

94

00:03:43,140 --> 00:03:39,640

hey thanks Greg great intro as always

95

00:03:44,490 --> 00:03:43,150

huh I try but man I am really psyched to

96

00:03:46,380 --> 00:03:44,500

be doing this thanks for being here I

97

00:03:48,210 --> 00:03:46,390

think it's gonna be a lot of fun for

98

00:03:49,980 --> 00:03:48,220

people who probably don't know you are a

99

00:03:51,690 --> 00:03:49,990

plus member who reached out after

100

00:03:54,450 --> 00:03:51,700

hearing me mention the desire to focus

101
00:03:56,190 --> 00:03:54,460
on a few shows that could be about

102
00:03:58,980 --> 00:03:56,200
permaculture the things that are really

103
00:04:01,200 --> 00:03:58,990
your expertise and here we are I got to

104
00:04:03,990 --> 00:04:01,210
say that I find this exciting because in

105
00:04:06,330 --> 00:04:04,000
the same way we learn about cars that

106
00:04:08,550 --> 00:04:06,340
used to run on alcohol Flying Saucer

107
00:04:11,580 --> 00:04:08,560
technology free energy devices light

108
00:04:14,850 --> 00:04:11,590
therapy holistic medicine natural cancer

109
00:04:17,039 --> 00:04:14,860
cures all these things I'd consider

110
00:04:18,810 --> 00:04:17,049
really powerful tools that were once

111
00:04:20,520 --> 00:04:18,820
there in the past we don't have many

112
00:04:23,360 --> 00:04:20,530
more they've probably been suppressed

113
00:04:25,320 --> 00:04:23,370

I think engineered abundance and

114

00:04:27,480 --> 00:04:25,330

biodynamic agriculture

115

00:04:29,280 --> 00:04:27,490

I think they qualify as things to put

116

00:04:30,930 --> 00:04:29,290

under the umbrella of suppressed

117

00:04:31,950 --> 00:04:30,940

knowledge and lost technology when you

118

00:04:34,290 --> 00:04:31,960

really think about it do you think

119

00:04:37,130 --> 00:04:34,300

that's fair to say yeah I mean nature

120

00:04:40,350 --> 00:04:37,140

itself is magic I mean the process of

121

00:04:44,280 --> 00:04:40,360

photosynthesis is a magical phenomenon

122

00:04:46,800 --> 00:04:44,290

and so all of our technology and modern

123

00:04:50,010 --> 00:04:46,810

times is very mechanical and sort of

124

00:04:52,530 --> 00:04:50,020

based on chemistry and manipulation of

125

00:04:54,240 --> 00:04:52,540

the physical domain

126

00:04:56,850 --> 00:04:54,250

with genetic engineering we're starting

127

00:04:58,860 --> 00:04:56,860

to get into the biological domain but

128

00:05:03,180 --> 00:04:58,870

most of biology has not been penetrated

129

00:05:07,190 --> 00:05:03,190

by our Natural Sciences and so we've got

130

00:05:10,440 --> 00:05:07,200

a lot of work to do to figure out how to

131

00:05:13,110 --> 00:05:10,450

reintegrate ourselves within the natural

132

00:05:14,190 --> 00:05:13,120

world but fortunately there's a lot of

133

00:05:18,090 --> 00:05:14,200

techniques that have already been

134

00:05:22,830 --> 00:05:18,100

developed and we just have to plug in

135

00:05:26,010 --> 00:05:22,840

and get to work mm-hmm I agree so to use

136

00:05:27,900 --> 00:05:26,020

your own journey and developing interest

137

00:05:30,510 --> 00:05:27,910

in permaculture and holistic thinking as

138

00:05:32,970 --> 00:05:30,520

a sort of template I'm curious to know

139

00:05:35,100 --> 00:05:32,980

about some of the early things that you

140

00:05:37,170 --> 00:05:35,110

learned about engaging with the natural

141

00:05:40,920 --> 00:05:37,180

world that maybe surprised you and lit

142

00:05:42,510 --> 00:05:40,930

that fire to learn more yeah well it

143

00:05:45,060 --> 00:05:42,520

really started for me when I was in

144

00:05:46,530 --> 00:05:45,070

college I ended up getting a degree in

145

00:05:47,880 --> 00:05:46,540

environmental science but I didn't start

146

00:05:49,830 --> 00:05:47,890

out that way I started out in the

147

00:05:51,360 --> 00:05:49,840

business school didn't like that floated

148

00:05:53,340 --> 00:05:51,370

around for a bit and I ended up having

149

00:05:55,560 --> 00:05:53,350

to take a biology credit and so I took a

150

00:05:58,770 --> 00:05:55,570

class called plant and plant communities

151

00:06:01,350 --> 00:05:58,780

and all it was was a week-long trip to

152

00:06:02,760 --> 00:06:01,360

the Smoky Mountain Park and basically

153

00:06:04,380 --> 00:06:02,770

every day we got up and spent the whole

154

00:06:05,850 --> 00:06:04,390

day in a different kind of plant

155

00:06:08,910 --> 00:06:05,860

community learning the plants and we

156

00:06:11,940 --> 00:06:08,920

would learn 20 30 40 species a day so I

157

00:06:13,080 --> 00:06:11,950

learned a hundred plants plus in a short

158

00:06:15,210 --> 00:06:13,090

period of time and I'd spend a lot of

159

00:06:17,220 --> 00:06:15,220

time outside growing up I grew up

160

00:06:18,990 --> 00:06:17,230

hunting and fishing with grandparents

161

00:06:20,460 --> 00:06:19,000

and stuff like that and always enjoyed

162

00:06:22,080 --> 00:06:20,470

being outside and was into backpacking

163

00:06:24,360 --> 00:06:22,090

and stuff like that but to me the

164

00:06:25,890 --> 00:06:24,370

outside was just like green nature when

165

00:06:28,230 --> 00:06:25,900

I would go for a hike it was beautiful

166

00:06:31,320 --> 00:06:28,240

but it was just green and beautiful and

167

00:06:34,680 --> 00:06:31,330

then when I learned the plants it's like

168

00:06:36,900 --> 00:06:34,690

a whole new world opened up and so it

169

00:06:38,760 --> 00:06:36,910

really started me on a journey of now

170

00:06:41,400 --> 00:06:38,770

when I went out outside went hiking

171

00:06:42,930 --> 00:06:41,410

taking my dog for a walk I would try to

172

00:06:45,090 --> 00:06:42,940

recognize the plants and try to identify

173

00:06:46,920 --> 00:06:45,100

them and then if I didn't see one it was

174

00:06:50,540 --> 00:06:46,930

like a challenge to figure out what it

175

00:06:53,960 --> 00:06:50,550

was and that just sort of led me on this

176

00:06:56,430 --> 00:06:53,970

lifelong pursuit of basically

177

00:06:58,650 --> 00:06:56,440

reintegrating back into nature first

178

00:07:02,070 --> 00:06:58,660

starting by figuring out what's there to

179

00:07:04,230 --> 00:07:02,080

begin with mmm yes I was gonna bring up

180

00:07:06,360 --> 00:07:04,240

that very class it made me think about

181

00:07:09,450 --> 00:07:06,370

that book and document

182

00:07:12,030 --> 00:07:09,460

the secret life of plants and that I

183

00:07:14,370 --> 00:07:12,040

think it's it's mainly about how maybe

184

00:07:16,950 --> 00:07:14,380

they do have this sort of conscious

185

00:07:18,659 --> 00:07:16,960

intelligence and we seem to generally

186

00:07:20,939 --> 00:07:18,669

overlook it maybe they do have some

187

00:07:22,740 --> 00:07:20,949

language and communication that isn't in

188

00:07:25,710 --> 00:07:22,750

English obviously but that doesn't mean

189

00:07:27,390 --> 00:07:25,720

it's not intelligent I mean is that kind

190

00:07:29,550 --> 00:07:27,400

of your impression of the plant world

191

00:07:32,280 --> 00:07:29,560

now yeah I mean that's a very

192

00:07:34,320 --> 00:07:32,290

complicated subject but there's more and

193

00:07:37,950 --> 00:07:34,330

more research showing how plants

194

00:07:40,230 --> 00:07:37,960

communicate both within members of the

195

00:07:44,909 --> 00:07:40,240

same species but also between species

196

00:07:48,540 --> 00:07:44,919

and then especially using fungus as a

197

00:07:50,129 --> 00:07:48,550

sort of communication medium mmm there's

198

00:07:52,020 --> 00:07:50,139

a lot of evidence showing that basically

199

00:07:54,810 --> 00:07:52,030

what's going on under the earth is that

200

00:07:57,180 --> 00:07:54,820

there are symbiotic fungus that lives

201
00:07:59,969 --> 00:07:57,190
literally like inside the plant roots

202
00:08:03,710 --> 00:07:59,979
and then they connect multiple species

203
00:08:07,100 --> 00:08:03,720
together and so that can serve both as

204
00:08:10,110 --> 00:08:07,110
communication channels but also as

205
00:08:13,050 --> 00:08:10,120
highways to move energy and materials

206
00:08:16,290 --> 00:08:13,060
around so when one plant needs extra

207
00:08:18,629 --> 00:08:16,300
energy because it's flowering the fungus

208
00:08:20,159 --> 00:08:18,639
can pull energy from another species

209
00:08:22,589 --> 00:08:20,169
that's not flowering right now and

210
00:08:24,420 --> 00:08:22,599
doesn't need it basically send it along

211
00:08:26,550 --> 00:08:24,430
this superhighway shoot it up to the

212
00:08:28,770 --> 00:08:26,560
plants that need it and so you know in

213
00:08:30,629 --> 00:08:28,780

an ecosystem plants are there's

214

00:08:32,459 --> 00:08:30,639

different species that flower throughout

215

00:08:34,350 --> 00:08:32,469

the year so every species has its own

216

00:08:36,570 --> 00:08:34,360

like one or two week window where it's

217

00:08:40,019 --> 00:08:36,580

at peak flowering and the fungus

218

00:08:41,850 --> 00:08:40,029

underground seems to migrate that energy

219

00:08:44,970 --> 00:08:41,860

and material between the plants when it

220

00:08:47,400 --> 00:08:44,980

needs it the extent that the energy and

221

00:08:49,620 --> 00:08:47,410

material routes also serve as a

222

00:08:52,079 --> 00:08:49,630

communication in a form of consciousness

223

00:08:54,660 --> 00:08:52,089

is obviously more speculative but it

224

00:08:58,380 --> 00:08:54,670

certainly wouldn't surprise me mm-hmm

225

00:08:59,910 --> 00:08:58,390

yes fungus and mushrooms are really a

226

00:09:02,699 --> 00:08:59,920

rabbit hole on their own right I've

227

00:09:04,680 --> 00:09:02,709

heard little anecdotes about the fact

228

00:09:06,810 --> 00:09:04,690

that they seem to be able to survive in

229

00:09:09,090 --> 00:09:06,820

the vacuum of space and maybe they are

230

00:09:11,820 --> 00:09:09,100

some weird alien intelligence that is

231

00:09:13,079 --> 00:09:11,830

kind of contributed to the terraforming

232

00:09:15,090 --> 00:09:13,089

of the planet and if I mean you want to

233

00:09:18,930 --> 00:09:15,100

talk about speculation there we are but

234

00:09:21,300 --> 00:09:18,940

you know for me with this whole

235

00:09:24,090 --> 00:09:21,310

section of material when I read some of

236

00:09:26,220 --> 00:09:24,100

the descriptions of what North America

237

00:09:28,950 --> 00:09:26,230

looked like before the Europeans arrived

238

00:09:29,340 --> 00:09:28,960

that's kind of what blew me away and set

239

00:09:31,080 --> 00:09:29,350

me off

240

00:09:32,880 --> 00:09:31,090

I mean descriptions that mention things

241

00:09:35,580 --> 00:09:32,890

like so many fish in the river that

242

00:09:38,910 --> 00:09:35,590

horses are crossing almost without

243

00:09:40,800 --> 00:09:38,920

touching bottom and just the change in

244

00:09:42,990 --> 00:09:40,810

understanding from thinking Native

245

00:09:45,120 --> 00:09:43,000

Americans just lived off the land to

246

00:09:47,370 --> 00:09:45,130

seeing how they actually worked with

247

00:09:49,260 --> 00:09:47,380

nature to amplify the resources they had

248

00:09:51,210 --> 00:09:49,270

I mean it starts to sound like a

249

00:09:54,150 --> 00:09:51,220

paradise and I've heard you refer to

250

00:09:56,760 --> 00:09:54,160

this as the wilderness myth tell us a

251
00:09:58,950 --> 00:09:56,770
bit about that and what the land looked

252
00:10:03,500 --> 00:09:58,960
like before the white man came if you

253
00:10:06,090 --> 00:10:03,510
could yeah so the wilderness myth is

254
00:10:08,820 --> 00:10:06,100
something that sort of subconsciously

255
00:10:12,660 --> 00:10:08,830
programmed into all of us in North

256
00:10:16,470 --> 00:10:12,670
America we think that this continent was

257
00:10:18,360 --> 00:10:16,480
a natural wilderness when the first

258
00:10:20,730 --> 00:10:18,370
settlers arrived and yeah there were

259
00:10:22,110 --> 00:10:20,740
humans hunting and gathering and eating

260
00:10:23,850 --> 00:10:22,120
berries and fruit and stuff and maybe

261
00:10:26,100 --> 00:10:23,860
hunting deer here and there but they

262
00:10:30,750 --> 00:10:26,110
were living with in a wilderness kind of

263
00:10:33,030 --> 00:10:30,760

more passively and that notion permeates

264

00:10:35,280 --> 00:10:33,040

how we think about nature I mean we

265

00:10:36,990 --> 00:10:35,290

assume that nature sort of the

266

00:10:38,490 --> 00:10:37,000

definition of nature means a place sort

267

00:10:40,530 --> 00:10:38,500

of without people so if you say

268

00:10:43,320 --> 00:10:40,540

something is all natural it means it

269

00:10:45,390 --> 00:10:43,330

hasn't been corrupted by people and

270

00:10:48,300 --> 00:10:45,400

there's this assumption that humans

271

00:10:51,540 --> 00:10:48,310

equaled somehow not natural and a

272

00:10:54,210 --> 00:10:51,550

corruption of nature when you look at

273

00:10:57,570 --> 00:10:54,220

the historical landscape and all of the

274

00:10:59,880 --> 00:10:57,580

evidence that we can pull out of data in

275

00:11:02,010 --> 00:10:59,890

terms of pollen records and soil cores

276

00:11:04,950 --> 00:11:02,020

and stuff like that there is massive

277

00:11:08,490 --> 00:11:04,960

evidence that the ecosystems across the

278

00:11:11,640 --> 00:11:08,500

continent are not organized the way they

279

00:11:14,310 --> 00:11:11,650

would have been if there were no humans

280

00:11:16,470 --> 00:11:14,320

here mm-hmm if there had been no humans

281

00:11:18,930 --> 00:11:16,480

present in North America when the first

282

00:11:20,750 --> 00:11:18,940

Europeans came it would have been a much

283

00:11:23,220 --> 00:11:20,760

different continent it would have been

284

00:11:25,880 --> 00:11:23,230

densely forested at least in the eastern

285

00:11:29,120 --> 00:11:25,890

half and there would have been much less

286

00:11:32,540 --> 00:11:29,130

diversity of both plants but also

287

00:11:36,050 --> 00:11:32,550

herbivores specifically bison

288

00:11:38,600 --> 00:11:36,060

and elk and deer which were in eastern

289

00:11:41,570 --> 00:11:38,610

North America especially at huge massive

290

00:11:44,840 --> 00:11:41,580

numbers even to the point where North

291

00:11:49,340 --> 00:11:44,850

America produced more meat in terms of

292

00:11:52,040 --> 00:11:49,350

pounds of say meat from a bison or from

293

00:11:55,250 --> 00:11:52,050

a deer from a elk than we produce today

294

00:11:58,280 --> 00:11:55,260

in our industrial agricultural systems

295

00:11:59,660 --> 00:11:58,290

so you know you talked about the Native

296

00:12:01,190 --> 00:11:59,670

Americans and how you could you know

297

00:12:02,690 --> 00:12:01,200

kind of walk across the water on fish

298

00:12:05,300 --> 00:12:02,700

and some of that we got to be a little

299

00:12:08,110 --> 00:12:05,310

bit careful there because poetic license

300

00:12:11,150 --> 00:12:08,120

well there was an abundance of

301

00:12:14,780 --> 00:12:11,160

biological diversity here for sure but

302

00:12:18,199 --> 00:12:14,790

there was also a massive genocide of the

303

00:12:20,150 --> 00:12:18,209

indigenous peoples preceding the first

304

00:12:23,240 --> 00:12:20,160

settlers coming in and riding accounts

305

00:12:24,980 --> 00:12:23,250

of it and so basically if Native

306

00:12:28,430 --> 00:12:24,990

Americans were managing the landscape

307

00:12:30,290 --> 00:12:28,440

and eating a lot of animals and then all

308

00:12:31,970 --> 00:12:30,300

those people died then all those animals

309

00:12:34,340 --> 00:12:31,980

are gonna explode in population numbers

310

00:12:37,670 --> 00:12:34,350

so the fish in the sea is the Bison out

311

00:12:40,519 --> 00:12:37,680

west and the SE passenger pigeons which

312

00:12:42,380 --> 00:12:40,529

were a hunted species may have been in

313

00:12:45,860 --> 00:12:42,390

such exorbitant numbers in the early

314

00:12:48,440 --> 00:12:45,870

1800s not just because they were always

315

00:12:51,199 --> 00:12:48,450

like that but because we slaughtered all

316

00:12:53,810 --> 00:12:51,209

of the hunters mmm yeah that makes a lot

317

00:12:55,460 --> 00:12:53,820

of sense it's like a factory that you

318

00:12:58,850 --> 00:12:55,470

flip the switch on and then walked away

319

00:13:01,280 --> 00:12:58,860

from its producing but you're not

320

00:13:03,680 --> 00:13:01,290

consuming what it produces that's

321

00:13:05,030 --> 00:13:03,690

exactly right and so we got to be a

322

00:13:07,220 --> 00:13:05,040

little bit careful with the early

323

00:13:09,199 --> 00:13:07,230

settler accounts of things because it's

324

00:13:10,940 --> 00:13:09,209

a little inflated over what it would

325

00:13:13,160 --> 00:13:10,950

have been before but even just looking

326

00:13:16,160 --> 00:13:13,170

at the landscape itself the fact that it

327

00:13:19,910 --> 00:13:16,170

wasn't closed-canopy forest from sea to

328

00:13:22,490 --> 00:13:19,920

shining sea means that there were active

329

00:13:26,329 --> 00:13:22,500

people here shaping the landscape for

330

00:13:29,360 --> 00:13:26,339

their own benefit essentially Native

331

00:13:32,150 --> 00:13:29,370

Americans were practicing advanced forms

332

00:13:35,360 --> 00:13:32,160

of Agriculture creating ecosystems that

333

00:13:36,680 --> 00:13:35,370

produced an immense amount of food it's

334

00:13:38,689 --> 00:13:36,690

hard to say whether they're comparable

335

00:13:41,800 --> 00:13:38,699

with what we produce in terms of food

336

00:13:44,090 --> 00:13:41,810

today but just looking at the amount of

337

00:13:46,190 --> 00:13:44,100

herbivores present on the continent

338

00:13:47,840 --> 00:13:46,200

tells you that because

339

00:13:50,570 --> 00:13:47,850

more meat produced back then than there

340

00:13:54,350 --> 00:13:50,580

is now clearly there was a lot of food

341

00:13:55,930 --> 00:13:54,360

being grown their most common tool for

342

00:13:59,750 --> 00:13:55,940

land management was fire

343

00:14:02,540 --> 00:13:59,760

so most areas were burned most of the

344

00:14:04,700 --> 00:14:02,550

time like most years most areas would

345

00:14:06,620 --> 00:14:04,710

get a fire and these fires weren't like

346

00:14:10,850 --> 00:14:06,630

forest fires there were small ground

347

00:14:13,280 --> 00:14:10,860

fire so anytime a grassland does not get

348

00:14:16,460 --> 00:14:13,290

fully grazed by the end of the year it's

349

00:14:19,640 --> 00:14:16,470

got a lot of dead grass and material

350

00:14:21,950 --> 00:14:19,650

biomass hanging out and if you can burn

351

00:14:25,310 --> 00:14:21,960

that off you massively increase the

352

00:14:30,500 --> 00:14:25,320

amount of production that that piece of

353

00:14:33,380 --> 00:14:30,510

land can produce and so by burning they

354

00:14:35,480 --> 00:14:33,390

were able to essentially move animals

355

00:14:38,750 --> 00:14:35,490

around because following a burn the

356

00:14:41,690 --> 00:14:38,760

grass that grows is extremely high in

357

00:14:45,500 --> 00:14:41,700

protein and sugar it's like candy for a

358

00:14:47,270 --> 00:14:45,510

cow or for a buffalo so by burning

359

00:14:51,410 --> 00:14:47,280

patches of ground they could essentially

360

00:14:53,810 --> 00:14:51,420

move herds of Buffalo around a kind of

361

00:14:56,150 --> 00:14:53,820

rotational grazing that farmers do today

362

00:14:59,420 --> 00:14:56,160

was practice back then but using fire

363

00:15:01,040 --> 00:14:59,430

instead of fences yeah I love that

364

00:15:03,650 --> 00:15:01,050

that was something I picked up from

365

00:15:05,840 --> 00:15:03,660

those chapters you sent me of your soon

366

00:15:08,240 --> 00:15:05,850

to be finished book and in there you

367

00:15:10,550 --> 00:15:08,250

mentioned that there were hundreds of

368

00:15:13,400 --> 00:15:10,560

reasons that they used fire and we have

369

00:15:15,470 --> 00:15:13,410

talked about that biochar process in the

370

00:15:19,820 --> 00:15:15,480

past a little bit but this idea of

371

00:15:22,670 --> 00:15:19,830

moving mammals around was really like an

372

00:15:26,330 --> 00:15:22,680

eye-opener to me as well as just how

373

00:15:29,780 --> 00:15:26,340

important oak trees were and acorns and

374

00:15:32,720 --> 00:15:29,790

that they would burn under the oak trees

375

00:15:34,970 --> 00:15:32,730

prior to acorn harvesting because it

376

00:15:36,890 --> 00:15:34,980

clears the ground to make the harvest

377

00:15:40,640 --> 00:15:36,900

easier you can see them and it also

378

00:15:44,300 --> 00:15:40,650

kills insects and pests that would have

379

00:15:47,590 --> 00:15:44,310

otherwise compromised some of that crop

380

00:15:51,260 --> 00:15:47,600

and it's just like man we really have a

381

00:15:54,110 --> 00:15:51,270

pretty racist look at these people as

382

00:15:56,150 --> 00:15:54,120

maybe savages or just kind of dealing

383

00:15:58,260 --> 00:15:56,160

with what they had but I mean these are

384

00:16:00,450 --> 00:15:58,270

human beings too and they have

385

00:16:03,210 --> 00:16:00,460

as much intelligence as anyone and this

386

00:16:05,460 --> 00:16:03,220

is just how it manifested in their

387

00:16:08,250 --> 00:16:05,470

environment and clearly at least to me

388

00:16:09,840 --> 00:16:08,260

it's better than what we do when you can

389

00:16:12,780 --> 00:16:09,850

see the results of where our system has

390

00:16:14,550 --> 00:16:12,790

taken us absolutely one of the things

391

00:16:17,850 --> 00:16:14,560

that a lot people don't realize is to

392

00:16:18,740 --> 00:16:17,860

the extent which humans evolved with the

393

00:16:22,770 --> 00:16:18,750

oak tree

394

00:16:25,440 --> 00:16:22,780

acorns were a staple crop for indigenous

395

00:16:27,330 --> 00:16:25,450

North Americans but they were a staple

396

00:16:30,090 --> 00:16:27,340

crop for our ancestors too you just got

397

00:16:33,030 --> 00:16:30,100

to look back prior to the Neolithic the

398

00:16:35,850 --> 00:16:33,040

Agricultural Revolution so in Northern

399

00:16:37,260 --> 00:16:35,860

Europe the old oak Grove's I mean it's

400

00:16:39,660 --> 00:16:37,270

not even just Northern Europe is pretty

401
00:16:42,930 --> 00:16:39,670
much all of Europe had chestnut and oak

402
00:16:45,390 --> 00:16:42,940
Grove's or savannas across the continent

403
00:16:49,350 --> 00:16:45,400
that our ancestors closer to you know

404
00:16:52,530 --> 00:16:49,360
8,000 years ago in the same way that was

405
00:16:53,640 --> 00:16:52,540
their staple crop and so oak trees are

406
00:16:56,100 --> 00:16:53,650
amazing because they've got so many

407
00:16:58,230 --> 00:16:56,110
different varieties that grow in so many

408
00:16:59,700 --> 00:16:58,240
different conditions there's the white

409
00:17:02,040 --> 00:16:59,710
oaks that grow in eastern North America

410
00:17:04,949 --> 00:17:02,050
that grow all the way from Manitoba down

411
00:17:06,720 --> 00:17:04,959
to Mexico and then you know where you're

412
00:17:09,510 --> 00:17:06,730
at in Southern California and all the

413
00:17:12,829 --> 00:17:09,520

way up the west coast there's different

414

00:17:16,380 --> 00:17:12,839

varieties of acorns that produce very

415

00:17:19,320 --> 00:17:16,390

edible and very high-quality nuts pretty

416

00:17:21,360 --> 00:17:19,330

prolific aliy and so when you have a

417

00:17:23,880 --> 00:17:21,370

savannah type landscape with widely

418

00:17:27,720 --> 00:17:23,890

spaced trees these trees can produce an

419

00:17:30,650 --> 00:17:27,730

enormous amount of food and it has been

420

00:17:35,190 --> 00:17:30,660

a staple crop that humans have relied on

421

00:17:36,110 --> 00:17:35,200

for survival for tens of thousands of

422

00:17:39,810 --> 00:17:36,120

years

423

00:17:41,610 --> 00:17:39,820

hmm well said and I wanted to talk a

424

00:17:43,830 --> 00:17:41,620

little more about savannas versus

425

00:17:45,870 --> 00:17:43,840

forests because that is the evidence

426

00:17:47,550 --> 00:17:45,880

that we know the landscape was

427

00:17:51,360 --> 00:17:47,560

engineered because if you leave it alone

428

00:17:53,460 --> 00:17:51,370

we get forests and forest as you said

429

00:17:56,880 --> 00:17:53,470

we're not the dominant ecosystem across

430

00:17:59,220 --> 00:17:56,890

the Midwest savannas were and I think

431

00:18:01,170 --> 00:17:59,230

we're starting at such a base level I

432

00:18:03,360 --> 00:18:01,180

don't know if people have a mental

433

00:18:05,130 --> 00:18:03,370

construct for what a savanna is or how

434

00:18:06,570 --> 00:18:05,140

it's different from a forest but can you

435

00:18:09,630 --> 00:18:06,580

break down some of those important

436

00:18:11,040 --> 00:18:09,640

differences yeah definitely so you know

437

00:18:11,820 --> 00:18:11,050

there's a spectrum so we can start with

438

00:18:13,860 --> 00:18:11,830

a grass

439

00:18:15,659 --> 00:18:13,870

land which is like some pasture or

440

00:18:18,180 --> 00:18:15,669

prairie that it's just open no trees and

441

00:18:19,710 --> 00:18:18,190

full of grasses and then we all know

442

00:18:22,830 --> 00:18:19,720

what a forest is where there's a closed

443

00:18:24,810 --> 00:18:22,840

canopy of trees if you go into a forest

444

00:18:26,549 --> 00:18:24,820

it's pretty dark not a lot of sunlight

445

00:18:28,950 --> 00:18:26,559

actually gets down to the ground and

446

00:18:32,610 --> 00:18:28,960

then a savanna is a place that is a

447

00:18:35,130 --> 00:18:32,620

grassland so it's a continuous cover of

448

00:18:38,639 --> 00:18:35,140

perennial grasses on the ground but then

449

00:18:40,799 --> 00:18:38,649

have scattered trees and so if you were

450

00:18:42,509 --> 00:18:40,809

to take a piece of land and let it go

451
00:18:44,490 --> 00:18:42,519
and don't do anything with it say it was

452
00:18:46,409 --> 00:18:44,500
plowed as a crop field and then you just

453
00:18:47,759 --> 00:18:46,419
abandon it if you're in the eastern

454
00:18:51,330 --> 00:18:47,769
United States where we get plenty of

455
00:18:53,580 --> 00:18:51,340
rain first grasses are gonna grow and

456
00:18:55,560 --> 00:18:53,590
weeds thistles and stuff like that will

457
00:18:56,960 --> 00:18:55,570
come in and go and then the grasses will

458
00:18:59,490 --> 00:18:56,970
get established and pretty quickly

459
00:19:03,169 --> 00:18:59,500
you're gonna get trees starting to grow

460
00:19:06,450 --> 00:19:03,179
fast growing shrubs and trees and

461
00:19:11,009 --> 00:19:06,460
generally within 20 or 30 years you've

462
00:19:13,019 --> 00:19:11,019
got trees growing pretty quickly that by

463
00:19:15,210 --> 00:19:13,029

year 30 you can get to the point where

464

00:19:17,279 --> 00:19:15,220

you have kind of a closed canopy where

465

00:19:18,870 --> 00:19:17,289

the ground starts to get shaded out and

466

00:19:21,000 --> 00:19:18,880

then once the ground gets shaded out you

467

00:19:23,039 --> 00:19:21,010

lose grass grass needs sunlight and so

468

00:19:26,549 --> 00:19:23,049

once there's shade over grass it

469

00:19:29,460 --> 00:19:26,559

basically goes away and grass is what

470

00:19:31,470 --> 00:19:29,470

holds on to the soil so when it rains if

471

00:19:33,450 --> 00:19:31,480

there's grasses those grass roots hold

472

00:19:35,610 --> 00:19:33,460

onto the soil and if there's not grass

473

00:19:37,710 --> 00:19:35,620

roots your soil washes away so in crop

474

00:19:40,950 --> 00:19:37,720

fields every time it rains soil washes

475

00:19:43,620 --> 00:19:40,960

away in forests you don't lose as much

476
00:19:45,120 --> 00:19:43,630
because you have tree roots that hold

477
00:19:48,480 --> 00:19:45,130
onto the soil but they don't hold on as

478
00:19:50,720 --> 00:19:48,490
well as grass roots and so the beauty

479
00:19:53,100 --> 00:19:50,730
about savannas you never have enough

480
00:19:56,340 --> 00:19:53,110
shade to shade out the grasses you

481
00:19:57,810 --> 00:19:56,350
always have grasses but you also have

482
00:20:00,480 --> 00:19:57,820
the trees and all the benefits that they

483
00:20:02,730 --> 00:20:00,490
provide trees are like the sweat pores

484
00:20:04,860 --> 00:20:02,740
of our planet you know they transpire

485
00:20:07,200 --> 00:20:04,870
them you know an oak tree will pull up

486
00:20:09,690 --> 00:20:07,210
hundreds of gallons of water a day out

487
00:20:11,370 --> 00:20:09,700
of the ground and transpire it into the

488
00:20:12,960 --> 00:20:11,380

atmosphere just like our sweat glands

489

00:20:14,610 --> 00:20:12,970

pull moisture out and then that

490

00:20:17,580 --> 00:20:14,620

evaporates on the surface trees do the

491

00:20:19,139 --> 00:20:17,590

same thing but at a huge scale and then

492

00:20:20,370 --> 00:20:19,149

you know obviously they produce food and

493

00:20:23,669 --> 00:20:20,380

do a lot of other good things to

494

00:20:25,710 --> 00:20:23,679

photosynthesize but having a savanna

495

00:20:27,570 --> 00:20:25,720

means that you have

496

00:20:30,240 --> 00:20:27,580

a continuous layer of grasses on the

497

00:20:32,129 --> 00:20:30,250

ground with scattered trees that aren't

498

00:20:34,919 --> 00:20:32,139

close enough together to then shade out

499

00:20:37,619 --> 00:20:34,929

the grasses and in the eastern United

500

00:20:38,759 --> 00:20:37,629

States we get enough rain that if you

501
00:20:40,919 --> 00:20:38,769
let a piece of land go it turns into

502
00:20:42,299 --> 00:20:40,929
forest really really quick you never get

503
00:20:45,080 --> 00:20:42,309
a savanna they just don't happen

504
00:20:49,289 --> 00:20:45,090
naturally they're very unnatural

505
00:20:51,149 --> 00:20:49,299
ecosystems when you define natural as

506
00:20:52,169 --> 00:20:51,159
being in absence of humans so if you

507
00:20:54,509 --> 00:20:52,179
take humans out of the equation you

508
00:20:56,399 --> 00:20:54,519
don't get savannas you know we were in

509
00:20:59,519 --> 00:20:56,409
the ice stages 12,000 years ago

510
00:21:01,740 --> 00:20:59,529
and it seems to be about the same time

511
00:21:04,560 --> 00:21:01,750
that the ice ages ended is when Native

512
00:21:06,629 --> 00:21:04,570
Americans sort of in earnest conquered

513
00:21:10,320 --> 00:21:06,639

North America and South American Central

514

00:21:11,730 --> 00:21:10,330

America and following the Ice Ages once

515

00:21:14,879 --> 00:21:11,740

the ice melted we basically turned into

516

00:21:17,159 --> 00:21:14,889

a boreal forest and then as it warmed up

517

00:21:19,169 --> 00:21:17,169

Native Americans came in and pretty

518

00:21:21,090 --> 00:21:19,179

quickly like within a few thousand years

519

00:21:24,269 --> 00:21:21,100

it went from forest to an open oak

520

00:21:27,350 --> 00:21:24,279

savanna you start seeing oak pollen and

521

00:21:29,549 --> 00:21:27,360

grass pollen in the pollen signatures

522

00:21:31,019 --> 00:21:29,559

about eight thousand six thousand years

523

00:21:34,710 --> 00:21:31,029

ago which is pretty remarkable because

524

00:21:37,320 --> 00:21:34,720

neither grasses nor oak trees can grow

525

00:21:40,110 --> 00:21:37,330

in shady conditions oak trees cannot

526
00:21:41,999 --> 00:21:40,120
grow cannot generate an acorn will not

527
00:21:44,159 --> 00:21:42,009
sprout and turn into an oak tree if it's

528
00:21:46,169 --> 00:21:44,169
shaded at all so once a forest turns

529
00:21:48,389 --> 00:21:46,179
shade you basically say goodbye to the

530
00:21:51,060 --> 00:21:48,399
Oaks so the fact that we had oak trees

531
00:21:54,180 --> 00:21:51,070
so prevalent in our ecosystems for so

532
00:21:56,669 --> 00:21:54,190
long is a dead ringer giveaway that

533
00:21:58,499 --> 00:21:56,679
something was going on to set back the

534
00:22:04,230 --> 00:21:58,509
forest and it was clearly Native

535
00:22:06,330 --> 00:22:04,240
Americans with fire yes and with this

536
00:22:08,940 --> 00:22:06,340
wilderness myth something I hadn't

537
00:22:11,759 --> 00:22:08,950
thought much about is how this affects

538
00:22:13,710 --> 00:22:11,769

much more than our ideas of pre colonial

539

00:22:16,110 --> 00:22:13,720

America it's still affecting us today

540

00:22:17,369 --> 00:22:16,120

even people whose hearts and minds are

541

00:22:20,249 --> 00:22:17,379

in the right places like these

542

00:22:22,350 --> 00:22:20,259

ecological communities and conservation

543

00:22:24,619 --> 00:22:22,360

movements they're all backwards too

544

00:22:27,810 --> 00:22:24,629

because they still have this

545

00:22:29,879 --> 00:22:27,820

presupposition that we need to just

546

00:22:32,549 --> 00:22:29,889

leave nature alone and let it get back

547

00:22:35,369 --> 00:22:32,559

to how it was and it's not going to be

548

00:22:38,340 --> 00:22:35,379

what you want because you're already

549

00:22:39,520 --> 00:22:38,350

starting off of a false premise and it's

550

00:22:43,390 --> 00:22:39,530

just interesting to see

551
00:22:44,890 --> 00:22:43,400
how even now that's still affecting even

552
00:22:47,560 --> 00:22:44,900
people who are trying to do the right

553
00:22:50,200 --> 00:22:47,570
thing oh absolutely

554
00:22:51,790 --> 00:22:50,210
it's permeated especially in the

555
00:22:54,820 --> 00:22:51,800
environmental and ecological communities

556
00:22:57,430 --> 00:22:54,830
I mean I spent a decade at University of

557
00:22:59,320 --> 00:22:57,440
Wisconsin doing ecology and restoration

558
00:23:03,150 --> 00:22:59,330
ecology where you know we would try to

559
00:23:05,350 --> 00:23:03,160
go restore an ecosystem but they define

560
00:23:09,490 --> 00:23:05,360
restoration as returning it to its

561
00:23:13,630 --> 00:23:09,500
natural state like it was before we got

562
00:23:16,060 --> 00:23:13,640
here which is so ironic it's just absurd

563
00:23:18,160 --> 00:23:16,070

when you really look at it but nobody

564

00:23:20,530 --> 00:23:18,170

really sees the problem they're the

565

00:23:22,060 --> 00:23:20,540

contradiction and that if you want to

566

00:23:23,830 --> 00:23:22,070

restore the landscape to the way it was

567

00:23:25,210 --> 00:23:23,840

before Europeans got here that's fine

568

00:23:27,910 --> 00:23:25,220

but we've got to realize that that

569

00:23:30,070 --> 00:23:27,920

wasn't natural at least how we define

570

00:23:32,110 --> 00:23:30,080

natural so like the wilderness myth has

571

00:23:36,910 --> 00:23:32,120

made its way into our definition of what

572

00:23:39,400 --> 00:23:36,920

natural means realizing that the planet

573

00:23:41,890 --> 00:23:39,410

hasn't been the same since humans of all

574

00:23:44,230 --> 00:23:41,900

desert species especially since we got

575

00:23:46,780 --> 00:23:44,240

the use of fire tens of thousands of

576

00:23:49,600 --> 00:23:46,790

years ago the planets not the same so if

577

00:23:52,330 --> 00:23:49,610

we define natural as meaning without

578

00:23:54,040 --> 00:23:52,340

humans then we've got to go way back and

579

00:23:55,270 --> 00:23:54,050

we don't have any idea of what that

580

00:23:57,850 --> 00:23:55,280

might look like anyways and what's the

581

00:24:00,010 --> 00:23:57,860

point we know that we had really diverse

582

00:24:02,260 --> 00:24:00,020

ecosystems here before Europeans arrived

583

00:24:03,370 --> 00:24:02,270

that produce a whole lot of food and so

584

00:24:05,380 --> 00:24:03,380

when I was at the University doing

585

00:24:07,900 --> 00:24:05,390

restoration work we would restore a

586

00:24:09,460 --> 00:24:07,910

prairie and then they would want to burn

587

00:24:12,340 --> 00:24:09,470

it all the time but even when you burn

588

00:24:14,110 --> 00:24:12,350

prairies all the time the trees start to

589

00:24:15,760 --> 00:24:14,120

come in and the trees will get kind of

590

00:24:19,090 --> 00:24:15,770

used to getting burned after a while and

591

00:24:21,940 --> 00:24:19,100

it will start to degrade quality over

592

00:24:25,150 --> 00:24:21,950

time without herbivores like grasslands

593

00:24:27,670 --> 00:24:25,160

need grazers they co-evolved together

594

00:24:28,900 --> 00:24:27,680

for 20 million years they absolutely

595

00:24:31,270 --> 00:24:28,910

need each other so you can't really have

596

00:24:34,090 --> 00:24:31,280

a grassland without a grazer and so when

597

00:24:36,520 --> 00:24:34,100

I would try to convince a university or

598

00:24:39,630 --> 00:24:36,530

a conservation project to let me bring

599

00:24:41,650 --> 00:24:39,640

in cattle to flash mob grazing

600

00:24:43,420 --> 00:24:41,660

restoration just like the Bison would

601
00:24:47,170 --> 00:24:43,430
have you know I got laughed out of the

602
00:24:49,780 --> 00:24:47,180
room because a cows aren't native and B

603
00:24:52,150 --> 00:24:49,790
that's why would we ever do that because

604
00:24:53,529 --> 00:24:52,160
we know that Indians burned so we should

605
00:24:55,180 --> 00:24:53,539
just burn so

606
00:24:57,639 --> 00:24:55,190
they did burn but they burned in order

607
00:25:00,489 --> 00:24:57,649
to bring the Bison and not just to burn

608
00:25:02,889 --> 00:25:00,499
for the heck of it so the contradiction

609
00:25:04,450 --> 00:25:02,899
in modern ecological restoration

610
00:25:06,639 --> 00:25:04,460
community especially in the eastern

611
00:25:09,789 --> 00:25:06,649
United States is pretty intense and once

612
00:25:11,200 --> 00:25:09,799
you look at the historical record and

613
00:25:13,389 --> 00:25:11,210

what the Native Americans are doing it

614

00:25:15,969 --> 00:25:13,399

becomes blaringly obvious that we can't

615

00:25:19,570 --> 00:25:15,979

restore our historic ecosystems without

616

00:25:22,419 --> 00:25:19,580

playing an active role in the management

617

00:25:24,940 --> 00:25:22,429

and maintenance of those systems mm-hmm

618

00:25:27,460 --> 00:25:24,950

I think that makes a lot of sense and I

619

00:25:30,310 --> 00:25:27,470

also wanted to ask you about water a

620

00:25:32,919 --> 00:25:30,320

little more because I got from those

621

00:25:35,349 --> 00:25:32,929

chapters that you let me check out that

622

00:25:38,769 --> 00:25:35,359

there used to be I guess 250 native

623

00:25:40,930 --> 00:25:38,779

types of freshwater shellfish before I

624

00:25:44,200 --> 00:25:40,940

guess the algae start consuming

625

00:25:46,299 --> 00:25:44,210

everything but you say in your area you

626

00:25:48,190 --> 00:25:46,309

say Madison Wisconsin sits nestled

627

00:25:50,349 --> 00:25:48,200

between four lakes surrounded by a large

628

00:25:52,509 --> 00:25:50,359

watershed filled to the brim with urban

629

00:25:54,759 --> 00:25:52,519

development and farmland these lakes

630

00:25:56,799 --> 00:25:54,769

therefore continually receive huge

631

00:25:58,930 --> 00:25:56,809

inputs of nitrogen and phosphorus from

632

00:26:01,479 --> 00:25:58,940

the fertilizer spread to keep lawns

633

00:26:03,369 --> 00:26:01,489

green and crop yields high and the heat

634

00:26:05,680 --> 00:26:03,379

of summer the city of Madison has to

635

00:26:08,589 --> 00:26:05,690

monitor the lakes for toxic algae blooms

636

00:26:10,389 --> 00:26:08,599

which they typically publicly announce

637

00:26:12,489 --> 00:26:10,399

in order to keep people and their pets

638

00:26:16,389 --> 00:26:12,499

from swimming in the poisoned waters I

639

00:26:18,580 --> 00:26:16,399

think that's just crazy you write in the

640

00:26:21,999 --> 00:26:18,590

book a little bit about clear water

641

00:26:24,729 --> 00:26:22,009

versus this like pea soup like covering

642

00:26:26,710 --> 00:26:24,739

that happens how does this affect our

643

00:26:28,509 --> 00:26:26,720

water what was a better way to manage

644

00:26:32,769 --> 00:26:28,519

natural water systems how was it done

645

00:26:35,379 --> 00:26:32,779

before so in Lake ecosystems there's two

646

00:26:37,089 --> 00:26:35,389

states that can exist and they're sort

647

00:26:39,129 --> 00:26:37,099

of like one or the other there's not

648

00:26:42,070 --> 00:26:39,139

much in between one is a clear water

649

00:26:44,499 --> 00:26:42,080

state where there's relatively low

650

00:26:46,930 --> 00:26:44,509

amount of phosphorus is the main kicker

651
00:26:51,190 --> 00:26:46,940
in aquatic systems and phosphorus comes

652
00:26:53,440 --> 00:26:51,200
in via runoff when it rains from soil it

653
00:26:55,029 --> 00:26:53,450
sticks to soil particles so if you put

654
00:26:56,379 --> 00:26:55,039
phosphorus fertilizer on a crop field

655
00:26:57,849 --> 00:26:56,389
and then it rains it runs into the

656
00:26:59,769 --> 00:26:57,859
waterway and now you got phosphorus in

657
00:27:01,359 --> 00:26:59,779
your water and basically what happens is

658
00:27:03,909 --> 00:27:01,369
when you have a clear water system you

659
00:27:06,220 --> 00:27:03,919
have sunlight getting to the bottom of

660
00:27:07,419 --> 00:27:06,230
the lakes and so in our area we've got a

661
00:27:09,219 --> 00:27:07,429
lot of these glacial lake

662
00:27:10,719 --> 00:27:09,229
they're basically leftover melted

663
00:27:13,180 --> 00:27:10,729

glaciers that turned into these lakes

664

00:27:14,379 --> 00:27:13,190

and when you read the historical

665

00:27:17,109 --> 00:27:14,389

accounts of the first settlers

666

00:27:18,489 --> 00:27:17,119

specifically these ones in Madison they

667

00:27:21,849 --> 00:27:18,499

would go out on a canoe and they could

668

00:27:24,820 --> 00:27:21,859

see 250 feet down to the bottom of the

669

00:27:26,889 --> 00:27:24,830

lake and see the white clay lake bottom

670

00:27:30,369 --> 00:27:26,899

and they could see all the plants and

671

00:27:31,719 --> 00:27:30,379

fish in between and so these clear water

672

00:27:33,519 --> 00:27:31,729

lakes you know you can think of it kind

673

00:27:34,959 --> 00:27:33,529

of like as a forest so there's sunlight

674

00:27:36,729 --> 00:27:34,969

filtering through the water that

675

00:27:38,289 --> 00:27:36,739

supports plant growth especially around

676

00:27:40,329 --> 00:27:38,299

the edges where it's not too deep and

677

00:27:42,099 --> 00:27:40,339

these plants produce a whole lot of

678

00:27:44,560 --> 00:27:42,109

oxygen which then gets dissolved into

679

00:27:46,989 --> 00:27:44,570

the water so these plants produce food

680

00:27:49,899 --> 00:27:46,999

for people like wild rice and Lotus

681

00:27:53,979 --> 00:27:49,909

which produces an edible root cattails

682

00:27:56,769 --> 00:27:53,989

and the like and so these plants are in

683

00:27:58,959 --> 00:27:56,779

there producing both food for humans but

684

00:28:02,529 --> 00:27:58,969

also food for fish and habitat and so

685

00:28:04,719 --> 00:28:02,539

these Clearwater Lakes were super filled

686

00:28:06,940 --> 00:28:04,729

with fish because of all the food and

687

00:28:09,159 --> 00:28:06,950

oxygen that the plants produced it

688

00:28:10,539 --> 00:28:09,169

supported a huge fish ecosystem so there

689

00:28:12,249 --> 00:28:10,549

was like the little fish the pan fish

690

00:28:14,259 --> 00:28:12,259

then the little bass and then you have a

691

00:28:17,469 --> 00:28:14,269

whole you know food chain on up to your

692

00:28:19,810 --> 00:28:17,479

big giant like five foot long lake trout

693

00:28:22,599 --> 00:28:19,820

which were predators that ate other big

694

00:28:24,669 --> 00:28:22,609

fish and this was sort of like you know

695

00:28:26,139 --> 00:28:24,679

I talked about acorns being staple crops

696

00:28:27,430 --> 00:28:26,149

for Native Americans they would harvest

697

00:28:29,469 --> 00:28:27,440

those in the fall and that would get

698

00:28:32,079 --> 00:28:29,479

them through the winter but summertime

699

00:28:33,999 --> 00:28:32,089

people were on the water pretty much

700

00:28:35,079 --> 00:28:34,009

across North America summer times were

701
00:28:36,879 --> 00:28:35,089
spent on the water because we had such

702
00:28:39,849 --> 00:28:36,889
amazing aquatic resources in terms of

703
00:28:42,099 --> 00:28:39,859
fish and shellfish and so basically what

704
00:28:44,889 --> 00:28:42,109
happens when you put phosphorus in the

705
00:28:47,349 --> 00:28:44,899
water whether that's directly in terms

706
00:28:49,899 --> 00:28:47,359
of sewage or indirectly in terms of

707
00:28:51,639 --> 00:28:49,909
runoff from either crop fields or from

708
00:28:53,019 --> 00:28:51,649
urban development you start putting

709
00:28:55,629 --> 00:28:53,029
phosphorus in that water and it reaches

710
00:28:57,969 --> 00:28:55,639
a threshold where basically there's

711
00:29:00,190 --> 00:28:57,979
enough phosphorous to spawn an algae

712
00:29:02,169 --> 00:29:00,200
bloom and these algie's are really

713
00:29:04,529 --> 00:29:02,179

really ancient cyanobacteria they're

714

00:29:07,450 --> 00:29:04,539

they were the first species to evolve

715

00:29:09,009 --> 00:29:07,460

photosynthesis that releases oxygen as a

716

00:29:10,659 --> 00:29:09,019

byproduct so they were the first ones to

717

00:29:13,089 --> 00:29:10,669

do photosynthesis as we know

718

00:29:15,430 --> 00:29:13,099

photosynthesis today a long long long

719

00:29:17,919 --> 00:29:15,440

time ago but anyway once they get enough

720

00:29:21,190 --> 00:29:17,929

phosphorous they bloom and they shade

721

00:29:24,310 --> 00:29:21,200

out the plants and they consume all the

722

00:29:26,169 --> 00:29:24,320

sex oxygen so the shade kills the plants

723

00:29:29,200 --> 00:29:26,179

and the consumption of excess oxygen

724

00:29:31,419 --> 00:29:29,210

kills the fish and then once you kind of

725

00:29:33,730 --> 00:29:31,429

have that for a little while you lose

726
00:29:35,740 --> 00:29:33,740
your plants which then doesn't allow you

727
00:29:38,139 --> 00:29:35,750
to rebuild your fish populations because

728
00:29:40,539 --> 00:29:38,149
of the lack of oxygen and the lack of

729
00:29:42,700 --> 00:29:40,549
food and habitat and so you get a you

730
00:29:45,340 --> 00:29:42,710
trophic system which there are some fish

731
00:29:47,379 --> 00:29:45,350
like the Asian carp that can live in

732
00:29:51,159 --> 00:29:47,389
these really murky pea-soup summer

733
00:29:52,779 --> 00:29:51,169
waters feeding on the algae you can get

734
00:29:54,310 --> 00:29:52,789
algae feeders that can survive but

735
00:29:56,019 --> 00:29:54,320
pretty much all your other fish and then

736
00:29:59,230 --> 00:29:56,029
all the plant resources all those go

737
00:30:02,019 --> 00:29:59,240
away too and so we call that eutrophic

738
00:30:04,930 --> 00:30:02,029

which just means over nutrient rich and so

739

00:30:06,279 --> 00:30:04,940

now we're at a place eastern United

740

00:30:09,279 --> 00:30:06,289

States especially in the Midwest where

741

00:30:11,500 --> 00:30:09,289

all the agricultural land is all of the waterways

742

00:30:14,019 --> 00:30:11,510

are eutrophic even the rivers and lakes

743

00:30:16,840 --> 00:30:14,029

you can't really fish in them you don't

744

00:30:18,519 --> 00:30:16,850

want to swim in them people's dogs die

745

00:30:20,169 --> 00:30:18,529

every year because they go swimming in

746

00:30:22,450 --> 00:30:20,179

the lake when there's an algae bloom the

747

00:30:25,539 --> 00:30:22,460

cyanobacteria produces a neurotoxin

748

00:30:29,799 --> 00:30:25,549

which is toxic for mammals and so it's

749

00:30:31,950 --> 00:30:29,809

pretty ugly hmm it's just so weird to

750

00:30:35,799 --> 00:30:31,960

even think about the intelligence of

751

00:30:37,990 --> 00:30:35,809

nature almost like responding in a way

752

00:30:40,180 --> 00:30:38,000

that's like hey you give me poison you

753

00:30:43,029 --> 00:30:40,190

get poison back I don't know it's just a

754

00:30:45,930 --> 00:30:43,039

when you think about the environment is

755

00:30:48,220 --> 00:30:45,940

conscious and there's this relationship

756

00:30:49,720 --> 00:30:48,230

regardless of if we're treating it right

757

00:30:52,299 --> 00:30:49,730

or wrong there is a cause-and-effect

758

00:30:53,470 --> 00:30:52,309

relationship that comes right back to us

759

00:30:56,169 --> 00:30:53,480

I mean we're not separate from nature

760

00:30:57,460 --> 00:30:56,179

but we have this idea that we are but I

761

00:30:59,889 --> 00:30:57,470

don't know it's just interesting to see

762

00:31:02,740 --> 00:30:59,899

that dynamic at play on the negative

763

00:31:06,610 --> 00:31:02,750

side of things oh that's exactly right

764

00:31:08,289 --> 00:31:06,620

the landscape is sending us signals all

765

00:31:09,669 --> 00:31:08,299

the time telling us we're on the right

766

00:31:11,710 --> 00:31:09,679

track or the wrong track and if we

767

00:31:13,269 --> 00:31:11,720

ignore those and we're on the wrong

768

00:31:16,090 --> 00:31:13,279

track it just gets worse and worse to

769

00:31:17,769 --> 00:31:16,100

the point where you can't grow food

770

00:31:21,490 --> 00:31:17,779

anymore and you're polluted out of house

771

00:31:24,070 --> 00:31:21,500

at home indeed and it's interesting and

772

00:31:26,919 --> 00:31:24,080

definitely new to me to hear about the

773

00:31:28,570 --> 00:31:26,929

engineered savannas of America but I

774

00:31:31,000 --> 00:31:28,580

wanted to try to squeeze in a little bit

775

00:31:34,970 --> 00:31:31,010

about the Amazon it is obviously the

776

00:31:37,070 --> 00:31:34,980

most complex and biodiverse landscape

777

00:31:39,470 --> 00:31:37,080

the planet and I think the wilderness

778

00:31:41,840 --> 00:31:39,480

myth might plague it as well because you

779

00:31:44,120 --> 00:31:41,850

told me that it's pretty clear that it

780

00:31:46,490 --> 00:31:44,130

was engineered how do we know what are

781

00:31:52,280 --> 00:31:46,500

the signs and clues that kind of show us

782

00:31:56,690 --> 00:31:52,290

that essentially when you exclude humans

783

00:31:58,100 --> 00:31:56,700

the plant community it's the same exact

784

00:31:59,960 --> 00:31:58,110

phenomenon as we're talking about for

785

00:32:01,669 --> 00:31:59,970

North America in that when you have

786

00:32:04,250 --> 00:32:01,679

humans of managing a system for

787

00:32:05,690 --> 00:32:04,260

themselves to produce food those are the

788

00:32:07,940 --> 00:32:05,700

type of species that are going to

789

00:32:10,490 --> 00:32:07,950

persist in your force in your ecosystem

790

00:32:14,510 --> 00:32:10,500

whether that's a savanna in the Midwest

791

00:32:16,520 --> 00:32:14,520

or the Amazon at the equator and so when

792

00:32:19,370 --> 00:32:16,530

we look at the species composition the

793

00:32:22,820 --> 00:32:19,380

way it was when we can first have any

794

00:32:25,280 --> 00:32:22,830

data on it there was a lot more species

795

00:32:27,230 --> 00:32:25,290

that produce food for humans in that

796

00:32:29,930 --> 00:32:27,240

species composition than there is now so

797

00:32:32,840 --> 00:32:29,940

as humans are removed and less active in

798

00:32:35,330 --> 00:32:32,850

the system it goes to a less diverse

799

00:32:37,700 --> 00:32:35,340

state and a state that produces more

800

00:32:39,770 --> 00:32:37,710

trees that don't produce food for humans

801
00:32:41,240 --> 00:32:39,780
so there's obviously a wide spectrum of

802
00:32:42,590 --> 00:32:41,250
different species some of them are more

803
00:32:46,190 --> 00:32:42,600
valuable than others from a human

804
00:32:48,169 --> 00:32:46,200
perspective the ratio of non-productive

805
00:32:51,230 --> 00:32:48,179
trees has increased over the last

806
00:32:54,650 --> 00:32:51,240
hundred years as humans have been less

807
00:32:57,020 --> 00:32:54,660
active in the ecosystem and so what's

808
00:33:00,230 --> 00:32:57,030
really interesting is if you read about

809
00:33:01,820 --> 00:33:00,240
the indigenous people of the Amazon we

810
00:33:03,650 --> 00:33:01,830
call their practices of Agriculture

811
00:33:07,370 --> 00:33:03,660
slash-and-burn which is a very

812
00:33:09,230 --> 00:33:07,380
derogatory way of gaining your existence

813
00:33:11,510 --> 00:33:09,240

slashing and burning sounds so bad and

814

00:33:13,580 --> 00:33:11,520

we look down upon them for it but when

815

00:33:15,680 --> 00:33:13,590

you actually go down to the Yucatan

816

00:33:18,590 --> 00:33:15,690

which I have not done but I have spoken

817

00:33:19,760 --> 00:33:18,600

to several archeologists that have spent

818

00:33:21,710 --> 00:33:19,770

a lot of time down there trying to

819

00:33:24,350 --> 00:33:21,720

figure out the old ways of growing food

820

00:33:26,539 --> 00:33:24,360

and essentially you know they would go

821

00:33:28,789 --> 00:33:26,549

into an area and clear out say an acre

822

00:33:30,500 --> 00:33:28,799

of forest and then they would burn that

823

00:33:32,150 --> 00:33:30,510

and they would burn the biomass in a

824

00:33:33,530 --> 00:33:32,160

very low intensity way like you

825

00:33:36,409 --> 00:33:33,540

mentioned biochar it creates a lot of

826

00:33:39,200 --> 00:33:36,419

charcoal so down in the Amazon they

827

00:33:41,780 --> 00:33:39,210

don't have the thick top soils that we

828

00:33:43,760 --> 00:33:41,790

have thanks to our grassland ecosystems

829

00:33:45,590 --> 00:33:43,770

grassland ecosystems create topsoil

830

00:33:48,830 --> 00:33:45,600

that's like one of the byproducts of a

831

00:33:50,600 --> 00:33:48,840

grassland with grazers is thick topsoil

832

00:33:53,269 --> 00:33:50,610

and so we have that up here down there

833

00:33:56,539 --> 00:33:53,279

in a forest all the nutrients that we

834

00:33:59,029 --> 00:33:56,549

have in our soils they have locked up in

835

00:34:01,970 --> 00:33:59,039

their giant trees and plants and so they

836

00:34:04,190 --> 00:34:01,980

really don't have a soil all of the

837

00:34:05,840 --> 00:34:04,200

potential nutrients are used in a

838

00:34:07,370 --> 00:34:05,850

rainforest ecosystem they're all up

839

00:34:10,790 --> 00:34:07,380

above ground they're not below ground

840

00:34:13,760 --> 00:34:10,800

and so it's really hard to grow annual

841

00:34:15,409 --> 00:34:13,770

crops so vegetables corn grains it's

842

00:34:17,659 --> 00:34:15,419

hard to grow that stuff because there's

843

00:34:19,369 --> 00:34:17,669

no soil minerals all the nutrients are

844

00:34:21,790 --> 00:34:19,379

locked up in the trees so they would cut

845

00:34:24,379 --> 00:34:21,800

down trees so they would slash and burn

846

00:34:26,839 --> 00:34:24,389

but they would do it on at whole and as

847

00:34:28,639 --> 00:34:26,849

a part of this much larger cycle of food

848

00:34:31,820 --> 00:34:28,649

production so you'd come into an area

849

00:34:33,379 --> 00:34:31,830

you'd cut down an acre of forest and you

850

00:34:34,909 --> 00:34:33,389

would burn it in a way that produced a

851
00:34:37,579 --> 00:34:34,919
whole bunch of charcoal on the ground

852
00:34:39,200 --> 00:34:37,589
then you could plant your guard and say

853
00:34:42,980 --> 00:34:39,210
so you're gonna have a really diverse

854
00:34:45,260 --> 00:34:42,990
Garden of 80 to 150 different vegetables

855
00:34:47,710 --> 00:34:45,270
and plant species and grains but at the

856
00:34:50,480 --> 00:34:47,720
same time you're also planting

857
00:34:53,000 --> 00:34:50,490
fast-growing and slow growing perennial

858
00:34:55,550 --> 00:34:53,010
trees to grow for your vegetables to

859
00:34:58,130 --> 00:34:55,560
grow between and so they would plant

860
00:35:01,070 --> 00:34:58,140
their favorite fruit and nut bearing

861
00:35:03,140 --> 00:35:01,080
trees in their gardens and so in one

862
00:35:06,890 --> 00:35:03,150
year they might slash and burn one acre

863
00:35:08,540 --> 00:35:06,900

but then that acre over the next 20

864

00:35:09,800 --> 00:35:08,550

years you know for the first two or

865

00:35:10,970 --> 00:35:09,810

three years its producing annual

866

00:35:12,950 --> 00:35:10,980

vegetables but then they would stop that

867

00:35:14,270 --> 00:35:12,960

and then they would just let the fruit

868

00:35:16,690 --> 00:35:14,280

and nut trees come and then they have

869

00:35:19,849 --> 00:35:16,700

this one acre orchard or food forest of

870

00:35:21,260 --> 00:35:19,859

breadfruit and avocados and bananas and

871

00:35:23,000 --> 00:35:21,270

all the things that they have down there

872

00:35:25,160 --> 00:35:23,010

and then they could go do that again

873

00:35:26,810 --> 00:35:25,170

somewhere else and so you kind of zoom

874

00:35:29,150 --> 00:35:26,820

out and look at that process it's like a

875

00:35:31,130 --> 00:35:29,160

20 year process by year 20 it's a closed

876

00:35:33,349 --> 00:35:31,140

canopy forest of all food producing

877

00:35:34,760 --> 00:35:33,359

trees and they had a immense diversity

878

00:35:36,950 --> 00:35:34,770

down there so we're talking like

879

00:35:39,099 --> 00:35:36,960

hundreds of species and if that had been

880

00:35:42,410 --> 00:35:39,109

let go there would have been like the

881

00:35:44,359 --> 00:35:42,420

two dozen plant species that would have

882

00:35:45,950 --> 00:35:44,369

been there that they cut and burned that

883

00:35:47,540 --> 00:35:45,960

would have been there but that's fairly

884

00:35:49,370 --> 00:35:47,550

low diversity relative to what they

885

00:35:51,410 --> 00:35:49,380

would then turn around and plant so then

886

00:35:52,910 --> 00:35:51,420

you look at that scale at the one acre

887

00:35:54,680 --> 00:35:52,920

scale and then look at the whole Amazon

888

00:35:56,720 --> 00:35:54,690

and imagine hundreds of thousands of

889

00:35:59,390 --> 00:35:56,730

people over time doing that in all the

890

00:36:01,250 --> 00:35:59,400

little patches what that turns into over

891

00:36:02,970 --> 00:36:01,260

time is an Amazon rainforest that's

892

00:36:05,680 --> 00:36:02,980

essentially one

893

00:36:08,980 --> 00:36:05,690

shifting mosaic of food forest so they

894

00:36:11,440 --> 00:36:08,990

were essentially terraforming the Amazon

895

00:36:14,950 --> 00:36:11,450

in order to produce a whole lot of

896

00:36:16,240 --> 00:36:14,960

perennial foods like food from trees you

897

00:36:17,350 --> 00:36:16,250

know they had their annual vegetables in

898

00:36:19,090 --> 00:36:17,360

there but that was only a small part of

899

00:36:21,940 --> 00:36:19,100

the cycle the main point is that they

900

00:36:24,460 --> 00:36:21,950

were planting lots of trees yeah and

901
00:36:26,770 --> 00:36:24,470
when you think about the intelligence of

902
00:36:28,990 --> 00:36:26,780
the people who set that environment off

903
00:36:30,520 --> 00:36:29,000
it's just pretty mind-blowing because

904
00:36:32,200 --> 00:36:30,530
like you said there's thousands of

905
00:36:34,510 --> 00:36:32,210
species that live in the Amazon and

906
00:36:36,610 --> 00:36:34,520
nowhere else and a lot of things we

907
00:36:39,550 --> 00:36:36,620
haven't even cataloged yet and when you

908
00:36:41,110 --> 00:36:39,560
think about that being engineered you

909
00:36:44,140 --> 00:36:41,120
really have to consider the relationship

910
00:36:46,060 --> 00:36:44,150
between even DNA and some of these

911
00:36:48,100 --> 00:36:46,070
processes I think you talked about it

912
00:36:50,650 --> 00:36:48,110
and your chapters is the connection

913
00:36:52,660 --> 00:36:50,660

between complexity and diversity versus

914

00:36:55,390 --> 00:36:52,670

disturbance that there's a relationship

915

00:36:57,460 --> 00:36:55,400

there because obviously we're going to a

916

00:37:00,160 --> 00:36:57,470

pretty deep time depth but it's almost

917

00:37:02,980 --> 00:37:00,170

like conjuring things that didn't exist

918

00:37:05,350 --> 00:37:02,990

before into being through a proper

919

00:37:09,040 --> 00:37:05,360

setting of the stage so to speak you

920

00:37:11,560 --> 00:37:09,050

know yeah I mean those disturbances are

921

00:37:14,230 --> 00:37:11,570

key to maintaining diversity in time

922

00:37:17,830 --> 00:37:14,240

because you get kind of static in the

923

00:37:19,480 --> 00:37:17,840

same place over time and so you know you

924

00:37:22,210 --> 00:37:19,490

get these disturbances that can either

925

00:37:23,710 --> 00:37:22,220

be a small scale like Native American

926

00:37:25,840 --> 00:37:23,720

burning somewhere or like a

927

00:37:27,940 --> 00:37:25,850

slash-and-burn project down in the

928

00:37:30,040 --> 00:37:27,950

Amazon or you can get the large scale

929

00:37:32,560 --> 00:37:30,050

disturbances like the end of the Ice Age

930

00:37:35,020 --> 00:37:32,570

the Younger Dryas the comet in the

931

00:37:37,060 --> 00:37:35,030

Yucatan that wiped out the dinosaurs in

932

00:37:39,420 --> 00:37:37,070

order to keep nature going

933

00:37:41,920 --> 00:37:39,430

we need these continual disturbances

934

00:37:43,840 --> 00:37:41,930

yeah I don't think people really think

935

00:37:45,880 --> 00:37:43,850

about that but it is a cycle it really

936

00:37:47,980 --> 00:37:45,890

speaks to that it's somewhat of an

937

00:37:51,280 --> 00:37:47,990

occult principle but order out of chaos

938

00:37:53,710 --> 00:37:51,290

it seems like as you said there are

939

00:37:55,780 --> 00:37:53,720

examples where they tried to do

940

00:37:57,700 --> 00:37:55,790

controlled burns on a schedule and they

941

00:37:58,960 --> 00:37:57,710

saw that that didn't really work they

942

00:38:00,820 --> 00:37:58,970

tried to not do it at all and that

943

00:38:04,780 --> 00:38:00,830

didn't really work it needs to somewhat

944

00:38:06,760 --> 00:38:04,790

be randomized to a degree and I don't

945

00:38:09,880 --> 00:38:06,770

know it's just strange because when you

946

00:38:11,890 --> 00:38:09,890

get into the magical mindset of druids

947

00:38:15,190 --> 00:38:11,900

and pagans they're very of the earth and

948

00:38:16,270 --> 00:38:15,200

that's kind of talks down on from like

949

00:38:17,500 --> 00:38:16,280

the Catholic

950

00:38:19,810 --> 00:38:17,510

perspective of course they were

951
00:38:23,290 --> 00:38:19,820
obviously genocided in their own right

952
00:38:25,540 --> 00:38:23,300
but the principles are right there in

953
00:38:27,930 --> 00:38:25,550
practice when dealing with the natural

954
00:38:29,700 --> 00:38:27,940
landscape it's it's baked into our

955
00:38:31,600 --> 00:38:29,710
system it seems

956
00:38:35,260 --> 00:38:31,610
yeah well it's interesting you know you

957
00:38:38,050 --> 00:38:35,270
mentioned how clearly the Native

958
00:38:39,610 --> 00:38:38,060
Americans or the Amazonians display a

959
00:38:41,440 --> 00:38:39,620
lot of intelligence in the way that

960
00:38:43,510 --> 00:38:41,450
they're managing the landscape but the

961
00:38:45,100 --> 00:38:43,520
interesting thing is it depends on how

962
00:38:47,710 --> 00:38:45,110
you define the word intelligence so if

963
00:38:50,410 --> 00:38:47,720

you were to give them maybe like an IQ

964

00:38:54,100 --> 00:38:50,420

test which is developed to measure a

965

00:38:56,230 --> 00:38:54,110

sort of Western centric type of right

966

00:38:58,240 --> 00:38:56,240

brained intelligence you know they may

967

00:39:01,570 --> 00:38:58,250

or may not actually do that well on that

968

00:39:03,220 --> 00:39:01,580

but in terms of being able to connect

969

00:39:07,420 --> 00:39:03,230

with nature they're on a whole nother

970

00:39:09,460 --> 00:39:07,430

level and so it's almost like before we

971

00:39:12,370 --> 00:39:09,470

developed the Industrial Revolution and

972

00:39:13,990 --> 00:39:12,380

even the Agricultural Revolution we were

973

00:39:15,820 --> 00:39:14,000

all much closer to the earth and we all

974

00:39:18,550 --> 00:39:15,830

had this sort of earth-based

975

00:39:21,670 --> 00:39:18,560

consciousness like we were plugged into

976

00:39:24,130 --> 00:39:21,680

the biosphere we were a part of it and

977

00:39:26,680 --> 00:39:24,140

we could sense with our sensory organs

978

00:39:28,960 --> 00:39:26,690

we could send sort of what the landscape

979

00:39:31,120 --> 00:39:28,970

wanted and what we should do within the

980

00:39:33,100 --> 00:39:31,130

landscape to benefit both the land and

981

00:39:35,110 --> 00:39:33,110

ourselves and that was just sort of like

982

00:39:38,470 --> 00:39:35,120

an inherent Sixth Sense that we all had

983

00:39:40,780 --> 00:39:38,480

and it seems like the development of the

984

00:39:42,550 --> 00:39:40,790

right brained logic and rational side of

985

00:39:44,200 --> 00:39:42,560

things that has started with the

986

00:39:47,020 --> 00:39:44,210

development of Agriculture and has sort

987

00:39:49,180 --> 00:39:47,030

of plateaued with the Renaissance and

988

00:39:51,940 --> 00:39:49,190

the Industrial Revolution the

989

00:39:54,550 --> 00:39:51,950

consequence of that is we completely cut

990

00:39:56,470 --> 00:39:54,560

off our consciousness from the earth

991

00:40:00,700 --> 00:39:56,480

consciousness so we have developed this

992

00:40:02,830 --> 00:40:00,710

very powerful individual ego but it is

993

00:40:06,370 --> 00:40:02,840

divorced it is separated from the

994

00:40:08,170 --> 00:40:06,380

natural world and so while now we may

995

00:40:09,480 --> 00:40:08,180

have very smart people and very

996

00:40:12,640 --> 00:40:09,490

intelligent people that can do really

997

00:40:17,130 --> 00:40:12,650

amazing and impressive feats of the mind

998

00:40:20,080 --> 00:40:17,140

we've lost the ability to connect and to

999

00:40:21,760 --> 00:40:20,090

have our consciousness be in touch with

1000

00:40:24,970 --> 00:40:21,770

the consciousness of the earth and so

1001
00:40:26,710 --> 00:40:24,980
where I see us having to go from here is

1002
00:40:28,720 --> 00:40:26,720
like we've developed this amazing

1003
00:40:30,040 --> 00:40:28,730
intellect and now we have to use that

1004
00:40:32,800 --> 00:40:30,050
intellect

1005
00:40:34,750 --> 00:40:32,810
consciously go back and reconnect with

1006
00:40:36,190 --> 00:40:34,760
our ecosystem so you know the indigenous

1007
00:40:38,230 --> 00:40:36,200
people in North America they weren't

1008
00:40:39,820 --> 00:40:38,240
consciously embedded in their landscape

1009
00:40:42,070 --> 00:40:39,830
they were unconsciously embedded they

1010
00:40:44,290 --> 00:40:42,080
didn't know any other way now we've come

1011
00:40:46,630 --> 00:40:44,300
completely divorced from that and it's

1012
00:40:49,330 --> 00:40:46,640
time for us to consciously go and

1013
00:40:51,100 --> 00:40:49,340

realize the problem which is that we're

1014

00:40:52,540 --> 00:40:51,110

disconnected from nature and then we

1015

00:40:55,660 --> 00:40:52,550

have to consciously go back and

1016

00:40:57,520 --> 00:40:55,670

reconnect ourselves cheers to that

1017

00:40:59,530 --> 00:40:57,530

and as we have talked about a lot of

1018

00:41:01,720 --> 00:40:59,540

this does start in the mind if your

1019

00:41:03,640 --> 00:41:01,730

ideas and philosophy are wrong then

1020

00:41:06,220 --> 00:41:03,650

you're wrong actions are going to follow

1021

00:41:08,350 --> 00:41:06,230

and maybe this is where social

1022

00:41:11,080 --> 00:41:08,360

conditioning and control come in I'm

1023

00:41:13,090 --> 00:41:11,090

sure it's both by design and a little

1024

00:41:15,700 --> 00:41:13,100

accidental ignorance the situation that

1025

00:41:18,520 --> 00:41:15,710

we're in right now but you write about

1026
00:41:21,790 --> 00:41:18,530
this you frame it up as the organic mind

1027
00:41:24,460 --> 00:41:21,800
verse the mechanical mind and some of

1028
00:41:26,080 --> 00:41:24,470
those details will be self-evident but

1029
00:41:28,390 --> 00:41:26,090
talk to us a little bit about the

1030
00:41:30,370 --> 00:41:28,400
difference in how we can better

1031
00:41:32,440 --> 00:41:30,380
understand the mechanical mind to get

1032
00:41:35,710 --> 00:41:32,450
away from it and move back towards that

1033
00:41:38,770 --> 00:41:35,720
organic mindset well the mechanical mind

1034
00:41:40,900 --> 00:41:38,780
is basically how we've all been

1035
00:41:43,450 --> 00:41:40,910
programmed and I would absolutely agree

1036
00:41:46,110 --> 00:41:43,460
that it's probably more accidental and

1037
00:41:49,390 --> 00:41:46,120
incidental than anything else but

1038
00:41:52,630 --> 00:41:49,400

essentially we've been programmed to see

1039

00:41:55,060 --> 00:41:52,640

the world through a lens where the

1040

00:41:56,350 --> 00:41:55,070

machine is sort of the ultimate metaphor

1041

00:41:58,510 --> 00:41:56,360

you know we think of the universe as

1042

00:42:02,080 --> 00:41:58,520

being like clock-like and that there's

1043

00:42:04,060 --> 00:42:02,090

sort of this deterministic natural world

1044

00:42:08,580 --> 00:42:04,070

that we fit within and everything is

1045

00:42:10,840 --> 00:42:08,590

random and the ultimate goal of any

1046

00:42:13,360 --> 00:42:10,850

operation or any person is to sort of

1047

00:42:15,010 --> 00:42:13,370

achieve machine-like efficiency and

1048

00:42:16,900 --> 00:42:15,020

perfection so when you hear some

1049

00:42:18,940 --> 00:42:16,910

politicians saying we need policies that

1050

00:42:20,620 --> 00:42:18,950

increase the efficiency of this or that

1051

00:42:22,000 --> 00:42:20,630

we all just sort of passively nod our

1052

00:42:23,830 --> 00:42:22,010

head like well of course that's a good

1053

00:42:25,900 --> 00:42:23,840

thing like increasing efficiency is

1054

00:42:28,150 --> 00:42:25,910

always a good thing well increasing

1055

00:42:30,130 --> 00:42:28,160

efficiency is a good thing sometimes but

1056

00:42:32,830 --> 00:42:30,140

it can be a horrible idea

1057

00:42:35,260 --> 00:42:32,840

some other times and so stepping back a

1058

00:42:37,660 --> 00:42:35,270

little bit we can see that the

1059

00:42:40,240 --> 00:42:37,670

mechanical or machine like conditioning

1060

00:42:42,280 --> 00:42:40,250

that we've all undergone has allowed us

1061

00:42:44,160 --> 00:42:42,290

to become really powerful and do things

1062

00:42:45,690 --> 00:42:44,170

like develop computers

1063

00:42:48,960 --> 00:42:45,700

and talk to each other across the

1064

00:42:52,260 --> 00:42:48,970

internet wirelessly which is amazing but

1065

00:42:54,359 --> 00:42:52,270

the consequence of that is we're our

1066

00:42:56,609 --> 00:42:54,369

cells starting to become machine like

1067

00:42:57,809 --> 00:42:56,619

we're losing which we've already lost

1068

00:42:59,520 --> 00:42:57,819

our connection with the natural world

1069

00:43:01,920 --> 00:42:59,530

but now we're to the point we're so

1070

00:43:03,660 --> 00:43:01,930

addicted to our screens it's been shown

1071

00:43:06,120 --> 00:43:03,670

that the more time you spend in front of

1072

00:43:07,710 --> 00:43:06,130

a screen the lower your empathy goes

1073

00:43:08,910 --> 00:43:07,720

which is really the fundamental

1074

00:43:12,599 --> 00:43:08,920

characteristic that makes us human

1075

00:43:15,000 --> 00:43:12,609

beings and so as we keep developing in

1076

00:43:16,140 --> 00:43:15,010

the mechanical world we lose our

1077

00:43:19,109 --> 00:43:16,150

connection to nature we lose our

1078

00:43:21,120 --> 00:43:19,119

connection to each other and the

1079

00:43:23,039 --> 00:43:21,130

endpoint of that basically is humans

1080

00:43:25,589 --> 00:43:23,049

fully integrating in machines which

1081

00:43:28,309 --> 00:43:25,599

seems like an agenda that there are

1082

00:43:30,690 --> 00:43:28,319

powers that are pushing us towards but

1083

00:43:32,400 --> 00:43:30,700

that doesn't mean we have to go along

1084

00:43:35,490 --> 00:43:32,410

with it and so it's my contention that

1085

00:43:37,230 --> 00:43:35,500

we need to sort of unplug a bit like

1086

00:43:38,670 --> 00:43:37,240

let's use technology for good and

1087

00:43:40,620 --> 00:43:38,680

recognize all the great things about

1088

00:43:42,690 --> 00:43:40,630

technology but hold back a little bit

1089

00:43:44,730 --> 00:43:42,700

and let's be mindful about this and

1090

00:43:47,370 --> 00:43:44,740

figure out what areas of technology

1091

00:43:50,670 --> 00:43:47,380

should we avoid and how can we use

1092

00:43:52,530 --> 00:43:50,680

technology to increase our reconnection

1093

00:43:54,210 --> 00:43:52,540

with the natural rule because this

1094

00:43:56,640 --> 00:43:54,220

trajectory that we're on with the

1095

00:43:58,650 --> 00:43:56,650

machine model which applied towards food

1096

00:44:00,960 --> 00:43:58,660

means that we have factory farms we have

1097

00:44:02,490 --> 00:44:00,970

industrial agriculture which is at a

1098

00:44:04,049 --> 00:44:02,500

fundamental level destroying the planet

1099

00:44:05,880 --> 00:44:04,059

and which is one of the reasons why I'm

1100

00:44:08,430 --> 00:44:05,890

doing what I'm doing is because when you

1101
00:44:10,650 --> 00:44:08,440
kind of realize the extent that we're

1102
00:44:12,780 --> 00:44:10,660
polluting the earth and compromising the

1103
00:44:15,809 --> 00:44:12,790
basic functionings of the planets

1104
00:44:18,750 --> 00:44:15,819
ecosystems humans can't live without a

1105
00:44:20,490 --> 00:44:18,760
planet that's functioning and so we're

1106
00:44:22,349 --> 00:44:20,500
able to sort of buy ourselves a little

1107
00:44:24,150 --> 00:44:22,359
bit of time with really cheap fossil

1108
00:44:27,059 --> 00:44:24,160
fuels but because those fossil fuels

1109
00:44:28,740 --> 00:44:27,069
substitute for a lot of the goods and

1110
00:44:30,839 --> 00:44:28,750
services that we get from ecosystems but

1111
00:44:33,120 --> 00:44:30,849
that's a band-aid that doesn't last for

1112
00:44:35,910 --> 00:44:33,130
very long and so we really have to get

1113
00:44:37,380 --> 00:44:35,920

our ecosystems back going if Humanity is

1114

00:44:39,630 --> 00:44:37,390

going to survive on this planet and the

1115

00:44:43,319 --> 00:44:39,640

only way I see us being able to do that

1116

00:44:46,049 --> 00:44:43,329

is to get out of this mechanical mindset

1117

00:44:48,299 --> 00:44:46,059

because the mechanical mindset does not

1118

00:44:50,640 --> 00:44:48,309

work in the development of an ecosystem

1119

00:44:53,549 --> 00:44:50,650

you can't restore an ecosystem with the

1120

00:44:54,980 --> 00:44:53,559

mechanical mindset nature will chew you

1121

00:44:57,960 --> 00:44:54,990

up and spit you out

1122

00:45:00,029 --> 00:44:57,970

amen and that's exactly the kind

1123

00:45:02,190 --> 00:45:00,039

Thayne I was hoping we would get into

1124

00:45:04,950 --> 00:45:02,200

because we can talk about screen

1125

00:45:07,200 --> 00:45:04,960

addiction and 5g and techno surveillance

1126

00:45:08,789 --> 00:45:07,210

all these things that the conspiracy

1127

00:45:11,970 --> 00:45:08,799

culture is really concerned about

1128

00:45:15,900 --> 00:45:11,980

shaking their fist at the air but that

1129

00:45:17,940 --> 00:45:15,910

doesn't do anything to fix it I mean we

1130

00:45:20,940 --> 00:45:17,950

can say we've been led down this bad

1131

00:45:23,250 --> 00:45:20,950

path and sure it's important to see how

1132

00:45:25,230 --> 00:45:23,260

that happened and exactly what

1133

00:45:27,930 --> 00:45:25,240

manipulations were in place and how bad

1134

00:45:31,230 --> 00:45:27,940

it was but it doesn't do anything to get

1135

00:45:34,020 --> 00:45:31,240

us off of that path this really is the

1136

00:45:36,450 --> 00:45:34,030

only way off as far as I can see and it

1137

00:45:38,880 --> 00:45:36,460

really gets to the heart of that

1138

00:45:41,760 --> 00:45:38,890

personal responsibility element that is

1139

00:45:43,710 --> 00:45:41,770

also what I think is important about

1140

00:45:46,440 --> 00:45:43,720

learning about magic I mean I think

1141

00:45:48,809 --> 00:45:46,450

nature personal responsibility magic

1142

00:45:51,420 --> 00:45:48,819

it's all kind of in that soup the

1143

00:45:53,460 --> 00:45:51,430

solution soup for getting us where we

1144

00:45:56,279 --> 00:45:53,470

want to go instead of just bitching

1145

00:45:58,920 --> 00:45:56,289

about where we've been yeah I mean

1146

00:46:01,200 --> 00:45:58,930

totally it we gotta find solutions not

1147

00:46:04,109 --> 00:46:01,210

just focus on the problems right so to

1148

00:46:07,289 --> 00:46:04,119

me the solutions involve sort of a

1149

00:46:09,210 --> 00:46:07,299

fundamental level rediscovering what it

1150

00:46:10,349 --> 00:46:09,220

means to be human like what does it mean

1151

00:46:12,089 --> 00:46:10,359

to be a human being

1152

00:46:13,440 --> 00:46:12,099

are there certain things that humans

1153

00:46:15,720 --> 00:46:13,450

need to go through in order to be

1154

00:46:17,940 --> 00:46:15,730

healthy in order to be satisfied to have

1155

00:46:19,589 --> 00:46:17,950

a meaningful life and are we missing

1156

00:46:21,630 --> 00:46:19,599

those things in our modern world I would

1157

00:46:25,500 --> 00:46:21,640

argue that we are missing many many

1158

00:46:28,589 --> 00:46:25,510

things that our consciousness need to

1159

00:46:30,809 --> 00:46:28,599

experience to be complete full happy

1160

00:46:32,309 --> 00:46:30,819

human beings and so that's sort of like

1161

00:46:33,900 --> 00:46:32,319

the place to start but then you sort of

1162

00:46:37,980 --> 00:46:33,910

realize once you start going down this

1163

00:46:40,250 --> 00:46:37,990

path all of our senses are dulled and

1164

00:46:42,020 --> 00:46:40,260

kind of [h__h]

1165

00:46:43,910 --> 00:46:42,030

all of our senses they're like muscles

1166

00:46:46,220 --> 00:46:43,920

so like our eyes are like muscles and if

1167

00:46:49,099 --> 00:46:46,230

we don't use them they start to degrade

1168

00:46:53,240 --> 00:46:49,109

and our hearing and our sense of smell

1169

00:46:55,730 --> 00:46:53,250

and our sense of touch all of our senses

1170

00:46:57,200 --> 00:46:55,740

are being dulled the longer we sit in

1171

00:46:59,180 --> 00:46:57,210

front of screens and all the time that

1172

00:47:03,290 --> 00:46:59,190

we're not out in nature actually

1173

00:47:07,730 --> 00:47:03,300

interacting with the real world our

1174

00:47:09,770 --> 00:47:07,740

senses are atrophying and so that's like

1175

00:47:11,780 --> 00:47:09,780

the first place to start is getting back

1176
00:47:13,609 --> 00:47:11,790
in touch with your sense of smell and

1177
00:47:17,300 --> 00:47:13,619
your sense of touch and your sense of

1178
00:47:18,620 --> 00:47:17,310
sight and being able to see birds being

1179
00:47:21,500 --> 00:47:18,630
able to identify a bird in your

1180
00:47:24,320 --> 00:47:21,510
peripheral vision without thinking about

1181
00:47:27,050 --> 00:47:24,330
it all these things that our human

1182
00:47:29,660 --> 00:47:27,060
bodies are evolved to do a whole bunch

1183
00:47:32,540 --> 00:47:29,670
of things like we should know all of the

1184
00:47:35,210 --> 00:47:32,550
different sights and smells and sounds

1185
00:47:37,070 --> 00:47:35,220
of animals and birds and plants we

1186
00:47:38,270 --> 00:47:37,080
shouldn't have to see a bear before

1187
00:47:39,740 --> 00:47:38,280
walking through the woods we should just

1188
00:47:41,359 --> 00:47:39,750

know that a bear was there an hour ago

1189

00:47:43,340 --> 00:47:41,369

because there's a certain kind of scent

1190

00:47:46,790 --> 00:47:43,350

left on a certain kind of plant and

1191

00:47:48,710 --> 00:47:46,800

these are the kinds of things that all

1192

00:47:51,260 --> 00:47:48,720

of our ancestors knew and I'm not saying

1193

00:47:53,359 --> 00:47:51,270

like we all need to get that deep into

1194

00:47:55,310 --> 00:47:53,369

it it's just we need to realize what

1195

00:47:57,950 --> 00:47:55,320

we've lost essentially in order to start

1196

00:48:00,230 --> 00:47:57,960

finding it back and so I'm never gonna

1197

00:48:01,970 --> 00:48:00,240

be that in touch with nature that I can

1198

00:48:04,640 --> 00:48:01,980

do these things I'm talking about but I

1199

00:48:07,220 --> 00:48:04,650

can make sure that my kids grow up in a

1200

00:48:10,970 --> 00:48:07,230

world where they have the opportunities

1201
00:48:14,330 --> 00:48:10,980
to keep their senses sharp and maintain

1202
00:48:15,680 --> 00:48:14,340
more of a human existence mm-hmm I

1203
00:48:17,599 --> 00:48:15,690
thought that was really interesting

1204
00:48:20,359 --> 00:48:17,609
because you kind of talk about how it

1205
00:48:23,330 --> 00:48:20,369
does take a generation that might be a

1206
00:48:24,620 --> 00:48:23,340
bitter pill to swallow because people

1207
00:48:27,440 --> 00:48:24,630
want to think they can change it

1208
00:48:30,560 --> 00:48:27,450
themselves but we kind of have this

1209
00:48:32,960 --> 00:48:30,570
slave mentality this suckling at the

1210
00:48:36,290 --> 00:48:32,970
societal t attitude we have lost

1211
00:48:40,609 --> 00:48:36,300
personal responsibility and maybe we are

1212
00:48:43,099 --> 00:48:40,619
so brainwashed that we only can correct

1213
00:48:44,960 --> 00:48:43,109

it by letting our kids be a little less

1214

00:48:47,599 --> 00:48:44,970

brainwashed and then their kids a little

1215

00:48:50,780 --> 00:48:47,609

less brainwashed and that might be the

1216

00:48:53,510 --> 00:48:50,790

sad reality that we're kind of too far

1217

00:48:55,790 --> 00:48:53,520

gone at this point to save ourselves

1218

00:48:58,790 --> 00:48:55,800

yeah I mean it is sad when you think

1219

00:49:02,000 --> 00:48:58,800

about it I think that it is totally

1220

00:49:05,300 --> 00:49:02,010

possible for all of us to do what we're

1221

00:49:07,550 --> 00:49:05,310

talking about and sort of deprogram our

1222

00:49:09,800 --> 00:49:07,560

brains and then reprogram them in a more

1223

00:49:11,390 --> 00:49:09,810

natural light we can all do that but it

1224

00:49:14,079 --> 00:49:11,400

takes a lot of work it takes decades

1225

00:49:16,460 --> 00:49:14,089

years and years and years of work and

1226
00:49:19,430 --> 00:49:16,470
many people aren't going to be willing

1227
00:49:21,230 --> 00:49:19,440
to do that and so the probably more

1228
00:49:23,300 --> 00:49:21,240
realistic way is you know we need a

1229
00:49:25,849 --> 00:49:23,310
certain percentage of people to undergo

1230
00:49:27,829 --> 00:49:25,859
that in this generation and then we need

1231
00:49:30,640 --> 00:49:27,839
to basically raise the next generation

1232
00:49:33,079 --> 00:49:30,650
in a way where they're not as programmed

1233
00:49:34,730 --> 00:49:33,089
not that we have to program them the

1234
00:49:37,810 --> 00:49:34,740
right way but we just got to try to keep

1235
00:49:39,920 --> 00:49:37,820
them from being programmed the wrong way

1236
00:49:42,260 --> 00:49:39,930
yeah I mean I agree with you it's kind

1237
00:49:45,500 --> 00:49:42,270
of like nature will take its course and

1238
00:49:48,230 --> 00:49:45,510

the proper mindsets will become apparent

1239

00:49:52,099 --> 00:49:48,240

with less manipulation at least I think

1240

00:49:53,839 --> 00:49:52,109

so yes I agree and so just to get back

1241

00:49:55,370 --> 00:49:53,849

to a little bit to what you do I'm sure

1242

00:49:58,010 --> 00:49:55,380

there's all sorts of little nuances

1243

00:49:59,930 --> 00:49:58,020

about how complex systems operate that

1244

00:50:00,260 --> 00:49:59,940

you wouldn't see until you're really in

1245

00:50:01,910 --> 00:50:00,270

it

1246

00:50:03,890 --> 00:50:01,920

like one example I've heard you talk

1247

00:50:06,020 --> 00:50:03,900

about is how we know animals like to

1248

00:50:07,790 --> 00:50:06,030

scratch their butts on trees right but

1249

00:50:09,680 --> 00:50:07,800

pigs roll around in mud and then when

1250

00:50:12,050 --> 00:50:09,690

they do it they're actually packing mud

1251
00:50:14,390 --> 00:50:12,060
around the base of the tree which

1252
00:50:15,770 --> 00:50:14,400
protects it and keeps pests away and

1253
00:50:18,380 --> 00:50:15,780
that sort of thing and I just thought

1254
00:50:20,480 --> 00:50:18,390
that was a really cool cause and effect

1255
00:50:23,420 --> 00:50:20,490
are there other similar examples you've

1256
00:50:26,720 --> 00:50:23,430
seen in nature's intelligence that you

1257
00:50:29,540 --> 00:50:26,730
could tell us about oh yeah there's lots

1258
00:50:31,730 --> 00:50:29,550
of things you know one thing would be

1259
00:50:35,300 --> 00:50:31,740
that one of the big concerns right now

1260
00:50:39,890 --> 00:50:35,310
with so called climate change is methane

1261
00:50:40,880 --> 00:50:39,900
and cattle are the big targets for that

1262
00:50:42,320 --> 00:50:40,890
it's like we got to get rid of our

1263
00:50:43,940 --> 00:50:42,330

cattle because they're farting and

1264

00:50:47,150 --> 00:50:43,950

belching well the methane more comes

1265

00:50:48,920 --> 00:50:47,160

from their burps and you can measure it

1266

00:50:51,170 --> 00:50:48,930

because when they go to a confined

1267

00:50:54,380 --> 00:50:51,180

animal feed lot operation a big factory

1268

00:50:56,210 --> 00:50:54,390

where they stuffed cows in a building

1269

00:50:57,740 --> 00:50:56,220

they can seal the building and then they

1270

00:51:00,320 --> 00:50:57,750

can count and measure the amount of

1271

00:51:02,030 --> 00:51:00,330

methane coming off right the fact that

1272

00:51:04,670 --> 00:51:02,040

it's a factory operation makes it really

1273

00:51:06,349 --> 00:51:04,680

easy to measure the methane okay now you

1274

00:51:07,450 --> 00:51:06,359

put a cow out on pasture it's a lot

1275

00:51:10,299 --> 00:51:07,460

harder to measure

1276

00:51:13,000 --> 00:51:10,309

they just assume that because feedlot

1277

00:51:15,460 --> 00:51:13,010

cows produce a lot of methane pastured

1278

00:51:18,130 --> 00:51:15,470

cows must too but the research that's

1279

00:51:20,710 --> 00:51:18,140

coming out now is that in healthy

1280

00:51:23,290 --> 00:51:20,720

pastures where the soil is being built

1281

00:51:25,210 --> 00:51:23,300

through responsible grazing there are a

1282

00:51:27,640 --> 00:51:25,220

class of bacteria called methane

1283

00:51:29,620 --> 00:51:27,650

atrophic bacteria that consumes methane

1284

00:51:33,160 --> 00:51:29,630

and so when a cows got its head down

1285

00:51:36,010 --> 00:51:33,170

eating grass it may burp and methane may

1286

00:51:39,040 --> 00:51:36,020

come out but it immediately gets gobbled

1287

00:51:41,890 --> 00:51:39,050

up by that bacteria which then converts

1288

00:51:45,220 --> 00:51:41,900

that methane into a co2 making it much

1289

00:51:48,339 --> 00:51:45,230

less harmful of a greenhouse gas so when

1290

00:51:50,500 --> 00:51:48,349

you isolate components out of nature you

1291

00:51:52,660 --> 00:51:50,510

get problems you get pest disease you

1292

00:51:54,370 --> 00:51:52,670

know all of our agriculture whether

1293

00:51:56,950 --> 00:51:54,380

we're talking conventional orchards or

1294

00:51:58,690 --> 00:51:56,960

crop fields you basically take one

1295

00:52:00,250 --> 00:51:58,700

component of nature say an almond tree

1296

00:52:01,480 --> 00:52:00,260

and we're gonna plant thousands of

1297

00:52:02,380 --> 00:52:01,490

thousands of almond trees right next to

1298

00:52:04,930 --> 00:52:02,390

each other we're gonna spray herbicide

1299

00:52:06,609 --> 00:52:04,940

to keep the grass is down yada yada yada

1300

00:52:08,559 --> 00:52:06,619

you like separate something from the

1301
00:52:10,030 --> 00:52:08,569
rest of nature when you do that nature

1302
00:52:11,410 --> 00:52:10,040
doesn't like it and it creates problems

1303
00:52:13,480 --> 00:52:11,420
for you and you're just like setting

1304
00:52:16,240 --> 00:52:13,490
yourself up for a constant fight against

1305
00:52:18,370 --> 00:52:16,250
diseases and you take pigs and you put

1306
00:52:19,630 --> 00:52:18,380
them into a feedlot well then they start

1307
00:52:21,160 --> 00:52:19,640
getting sick and so what do you do you

1308
00:52:22,359 --> 00:52:21,170
start giving them antibiotics well now

1309
00:52:24,190 --> 00:52:22,369
we've got antibiotic resistant bacteria

1310
00:52:26,770 --> 00:52:24,200
so there's this like arms race that

1311
00:52:28,390 --> 00:52:26,780
happens when we fight nature the cool

1312
00:52:31,210 --> 00:52:28,400
thing is when we start to work with

1313
00:52:33,250 --> 00:52:31,220

nature is that it flips the other way so

1314

00:52:36,130 --> 00:52:33,260

instead of nature hurting us nature

1315

00:52:39,039 --> 00:52:36,140

starts to help us and the example of the

1316

00:52:40,539 --> 00:52:39,049

pigs is a great example of that where if

1317

00:52:42,250 --> 00:52:40,549

you have an apple orchard there's all

1318

00:52:43,990 --> 00:52:42,260

kinds of bugs that want to eat those

1319

00:52:45,700 --> 00:52:44,000

apples and many of them crawl right up

1320

00:52:47,260 --> 00:52:45,710

the trunk of the tree to get to the

1321

00:52:48,910 --> 00:52:47,270

apples well if you've got pigs in there

1322

00:52:50,230 --> 00:52:48,920

and they're wallowing in mud and

1323

00:52:52,180 --> 00:52:50,240

scratching their butts on the tree then

1324

00:52:54,039 --> 00:52:52,190

they seal that tree and now that insects

1325

00:52:57,640 --> 00:52:54,049

can't climb up anymore and so there's

1326
00:52:59,349 --> 00:52:57,650
lots of examples like that where when

1327
00:53:01,240 --> 00:52:59,359
you start to work in natural systems

1328
00:53:04,030 --> 00:53:01,250
nature rewards you because there's all

1329
00:53:07,569 --> 00:53:04,040
these knock-on benefits that you

1330
00:53:09,640 --> 00:53:07,579
probably didn't anticipate by restoring

1331
00:53:11,829 --> 00:53:09,650
a more natural system

1332
00:53:13,930 --> 00:53:11,839
Wow man yeah I think those little

1333
00:53:15,519 --> 00:53:13,940
examples are pretty fun and interesting

1334
00:53:17,620 --> 00:53:15,529
and maybe we can take that a little

1335
00:53:19,900 --> 00:53:17,630
further with what you do on the farm in

1336
00:53:22,930 --> 00:53:19,910
terms of using animals in place of

1337
00:53:25,109 --> 00:53:22,940
mechanical tools it's sort of along the

1338
00:53:27,370 --> 00:53:25,119

same lines and also ties into the

1339

00:53:29,470 --> 00:53:27,380

rotational grazing that you mentioned

1340

00:53:33,339 --> 00:53:29,480

earlier but what more can be said about

1341

00:53:35,259 --> 00:53:33,349

a well oiled Farms ability to get a

1342

00:53:40,239 --> 00:53:35,269

little sweat equity out of its animals

1343

00:53:41,950 --> 00:53:40,249

in holistic and natural ways yeah so I

1344

00:53:44,349 --> 00:53:41,960

guess we could back up a little bit you

1345

00:53:46,539 --> 00:53:44,359

know we call it mastodon valley farm for

1346

00:53:48,519 --> 00:53:46,549

a couple reasons one is that there was a

1347

00:53:51,160 --> 00:53:48,529

big Mastodon skeleton found after a

1348

00:53:52,900 --> 00:53:51,170

flood back in the early 1900s just a few

1349

00:53:54,609 --> 00:53:52,910

miles from our farm so there's lots of

1350

00:53:55,989 --> 00:53:54,619

mastodons in our area

1351
00:53:58,120 --> 00:53:55,999
but there are mastodons all over eastern

1352
00:53:59,620 --> 00:53:58,130
North America along with the rest of the

1353
00:54:01,539 --> 00:53:59,630
megafauna there's a lot of megafauna on

1354
00:54:03,400 --> 00:54:01,549
this continent before the last ice age

1355
00:54:05,109 --> 00:54:03,410
and they had been here for a very long

1356
00:54:08,370 --> 00:54:05,119
time about 30 million years and we're

1357
00:54:11,499 --> 00:54:08,380
talking big horses and big ground sloths

1358
00:54:14,620 --> 00:54:11,509
beavers the size of a Volkswagen bug

1359
00:54:16,420 --> 00:54:14,630
really large animals the Bison that were

1360
00:54:17,890 --> 00:54:16,430
here were much bigger than the Bison

1361
00:54:19,630 --> 00:54:17,900
that we have now which actually came

1362
00:54:20,890 --> 00:54:19,640
over from Eurasia fairly recently

1363
00:54:22,599 --> 00:54:20,900

they're like a small a diminutive

1364

00:54:24,549 --> 00:54:22,609

version of what we used to have the

1365

00:54:26,019 --> 00:54:24,559

original American bison anyway there was

1366

00:54:28,269 --> 00:54:26,029

lots of big animals here and so we

1367

00:54:31,569 --> 00:54:28,279

talked about how the role of the Native

1368

00:54:33,489 --> 00:54:31,579

Americans in managing the savanna

1369

00:54:34,900 --> 00:54:33,499

landscape with fire to keep things

1370

00:54:38,470 --> 00:54:34,910

opened and to maintain this balance

1371

00:54:39,729 --> 00:54:38,480

between the grassland and trees what's

1372

00:54:41,829 --> 00:54:39,739

interesting is when you look back before

1373

00:54:43,749 --> 00:54:41,839

Native Americans got here you see the

1374

00:54:46,180 --> 00:54:43,759

same signature is the same savanna

1375

00:54:48,249 --> 00:54:46,190

landscape happening because we had all

1376

00:54:51,099 --> 00:54:48,259

these huge animals that were eating the

1377

00:54:53,470 --> 00:54:51,109

trees to maintain this open savanna

1378

00:54:55,059 --> 00:54:53,480

landscape so we've had savannas they've

1379

00:54:56,620 --> 00:54:55,069

been remarkably persistent for the last

1380

00:54:59,800 --> 00:54:56,630

30 million years considering they're

1381

00:55:02,110 --> 00:54:59,810

entirely unnatural quote-unquote now

1382

00:55:04,680 --> 00:55:02,120

I think about that a lot and so like all

1383

00:55:07,390 --> 00:55:04,690

of the plants that we have around us

1384

00:55:10,030 --> 00:55:07,400

evolved in the context of extreme

1385

00:55:11,860 --> 00:55:10,040

grazing and browsing by large animals

1386

00:55:13,300 --> 00:55:11,870

throughout their evolutionary history

1387

00:55:17,470 --> 00:55:13,310

and so we got to remember that

1388

00:55:19,930 --> 00:55:17,480

and so we manage our animals in ways to

1389

00:55:22,270 --> 00:55:19,940

try to mimic the way that megafauna

1390

00:55:24,940 --> 00:55:22,280

would have grazed and so when a herd of

1391

00:55:26,020 --> 00:55:24,950

bison say would have come through there

1392

00:55:27,250 --> 00:55:26,030

would have been a whole bunch of them

1393

00:55:29,650 --> 00:55:27,260

and they would have plowed through the

1394

00:55:30,700 --> 00:55:29,660

area eating everything in sight and then

1395

00:55:33,160 --> 00:55:30,710

they would have left and then they

1396

00:55:35,560 --> 00:55:33,170

wouldn't have come back what happens

1397

00:55:38,020 --> 00:55:35,570

when you graze an area really hard and

1398

00:55:41,560 --> 00:55:38,030

then allow it to recover is that that

1399

00:55:44,140 --> 00:55:41,570

recovery process is super beneficial for

1400

00:55:48,340 --> 00:55:44,150

building soil and for plant diversity so

1401

00:55:51,040 --> 00:55:48,350

lots of plants really expect that POLST

1402

00:55:52,420 --> 00:55:51,050

grazing event and so they really like it

1403

00:55:54,640 --> 00:55:52,430

when they get it and then you get more

1404

00:55:58,000 --> 00:55:54,650

diverse pastures that have much better

1405

00:55:59,980 --> 00:55:58,010

soil we obviously don't have mastodons

1406

00:56:01,720 --> 00:55:59,990

and ground sloths anymore the biggest

1407

00:56:04,180 --> 00:56:01,730

animals I can get my hand on in a

1408

00:56:07,180 --> 00:56:04,190

reasonable way are cattle and sheep and

1409

00:56:10,090 --> 00:56:07,190

goats and pigs we do poultry as well so

1410

00:56:14,020 --> 00:56:10,100

chickens and turkeys and so each species

1411

00:56:15,280 --> 00:56:14,030

has its own niche its own sets of plants

1412

00:56:18,010 --> 00:56:15,290

that it likes to eat its own habitat

1413

00:56:22,720 --> 00:56:18,020

likes it spend its day in we try to

1414

00:56:24,430 --> 00:56:22,730

graze in ways that are pulsed so an area

1415

00:56:25,960 --> 00:56:24,440

will grow up it'll be really lush we'll

1416

00:56:27,730 --> 00:56:25,970

hit it with the cows we'll hit it with

1417

00:56:29,920 --> 00:56:27,740

the sheep will might bring in the pigs

1418

00:56:32,050 --> 00:56:29,930

and then we just let it go we let it

1419

00:56:34,540 --> 00:56:32,060

rest for a month or five weeks or six

1420

00:56:36,820 --> 00:56:34,550

weeks and then at that point it's lush

1421

00:56:38,290 --> 00:56:36,830

and green and tall and ready to be

1422

00:56:40,060 --> 00:56:38,300

grazed again and then we'll graze it

1423

00:56:42,090 --> 00:56:40,070

again and it's that rest period

1424

00:56:45,580 --> 00:56:42,100

following grazing that's essential to

1425

00:56:49,030 --> 00:56:45,590

plant health and the ability to build

1426

00:56:50,980 --> 00:56:49,040

soil and so our big goal at our farm is

1427

00:56:51,460 --> 00:56:50,990

to build soil kind of as rapidly as we

1428

00:56:54,250 --> 00:56:51,470

can

1429

00:56:56,110 --> 00:56:54,260

it's these long rest periods followed by

1430

00:56:58,030 --> 00:56:56,120

pulsed grazing that allows us to build

1431

00:57:00,070 --> 00:56:58,040

soil and we're doing it we're collecting

1432

00:57:02,140 --> 00:57:00,080

data and you know I knew it was possible

1433

00:57:03,760 --> 00:57:02,150

but until I started doing it I didn't

1434

00:57:07,900 --> 00:57:03,770

even really believe how fast you can

1435

00:57:10,870 --> 00:57:07,910

grow soil very cool and so a lot of us

1436

00:57:13,150 --> 00:57:10,880

probably won't be able to completely

1437

00:57:15,430 --> 00:57:13,160

dedicate ourselves to a multi a

1438

00:57:17,140 --> 00:57:15,440

farm but you know maybe there are some

1439

00:57:19,839 --> 00:57:17,150

people listening who are lucky to

1440

00:57:22,089 --> 00:57:19,849

actually have a small yard or something

1441

00:57:24,490 --> 00:57:22,099

like that do you have any advice or

1442

00:57:27,549 --> 00:57:24,500

resources for people on how to make the

1443

00:57:30,190 --> 00:57:27,559

most out of a little oh absolutely I

1444

00:57:32,740 --> 00:57:30,200

mean this obviously there's a lower

1445

00:57:34,240 --> 00:57:32,750

limit to what you can do with cattle you

1446

00:57:36,039 --> 00:57:34,250

know there's lots of things available if

1447

00:57:38,020 --> 00:57:36,049

you've got a quarter acre a half acre an

1448

00:57:40,059 --> 00:57:38,030

acre I mean Ducks are really cool

1449

00:57:41,799 --> 00:57:40,069

grazing animals like they eat a lot of

1450

00:57:43,950 --> 00:57:41,809

grass and geese eat a lot of grass

1451

00:57:46,750 --> 00:57:43,960

there's really cool

1452

00:57:49,180 --> 00:57:46,760

integrated systems that you can do with

1453

00:57:51,630 --> 00:57:49,190

poultry or ducks especially they work

1454

00:57:54,400 --> 00:57:51,640

really well with tree planting so

1455

00:57:56,680 --> 00:57:54,410

growing an orchard or like a diverse

1456

00:58:00,190 --> 00:57:56,690

kind of food forest ducks and geese can

1457

00:58:02,260 --> 00:58:00,200

be integrated into that obviously lots

1458

00:58:03,730 --> 00:58:02,270

depends on what kind of land your on and

1459

00:58:06,279 --> 00:58:03,740

soil and yada yada and all that kind of

1460

00:58:07,569 --> 00:58:06,289

stuff but it's not scale dependent you

1461

00:58:10,210 --> 00:58:07,579

don't have to be big scale and a lot of

1462

00:58:13,089 --> 00:58:10,220

times we're on two hundred and twenty

1463

00:58:15,370 --> 00:58:13,099

acres which sounds like a lot to most

1464

00:58:17,710 --> 00:58:15,380

people but in Ag land that's actually

1465

00:58:20,760 --> 00:58:17,720

like a tiny farm but to most people

1466

00:58:23,140 --> 00:58:20,770

that's beyond imaginably big and

1467

00:58:25,599 --> 00:58:23,150

sometimes I mean I enjoy what I do but

1468

00:58:27,609 --> 00:58:25,609

I'm working on such an extensive land

1469

00:58:32,039 --> 00:58:27,619

base that I don't get to really like

1470

00:58:34,299 --> 00:58:32,049

zoom in and make small areas really

1471

00:58:35,920 --> 00:58:34,309

what's really cool about this is that

1472

00:58:37,900 --> 00:58:35,930

there's really no limit to how much you

1473

00:58:39,730 --> 00:58:37,910

can produce on an acre like you can just

1474

00:58:41,319 --> 00:58:39,740

keep packing things in because nature

1475

00:58:43,420 --> 00:58:41,329

wants to be diverse and so if you can

1476

00:58:44,920 --> 00:58:43,430

find the right species that have these

1477

00:58:47,349 --> 00:58:44,930

positive interactions with each other

1478

00:58:49,539 --> 00:58:47,359

that have symbiosis then you can really

1479

00:58:50,920 --> 00:58:49,549

constantly stack things on top of each

1480

00:58:52,329 --> 00:58:50,930

other you can build little ponds that

1481

00:58:53,829 --> 00:58:52,339

can have fish and you can do all these

1482

00:58:55,329 --> 00:58:53,839

like little things you can make

1483

00:58:57,460 --> 00:58:55,339

microclimate so that even if you're in a

1484

00:59:00,490 --> 00:58:57,470

cold region if you bring in some rocks

1485

00:59:02,620 --> 00:59:00,500

and dig a pond the right way you can

1486

00:59:03,910 --> 00:59:02,630

then increase the heat that is captured

1487

00:59:07,000 --> 00:59:03,920

and stored on your land which then

1488

00:59:09,250 --> 00:59:07,010

allows you to grow plants or trees that

1489

00:59:11,680 --> 00:59:09,260

produce fruit that shouldn't be able to

1490

00:59:13,510 --> 00:59:11,690

grow there because it's too cold lots of

1491

00:59:15,160 --> 00:59:13,520

things like that you can do on smaller

1492

00:59:17,019 --> 00:59:15,170

acreage where you can really be

1493

00:59:19,779 --> 00:59:17,029

intensively focused instead of

1494

00:59:22,059 --> 00:59:19,789

extensively focused that's cool that's

1495

00:59:24,460 --> 00:59:22,069

cool I mean that's definitely inspiring

1496

00:59:26,630 --> 00:59:24,470

for people who maybe think that some of

1497

00:59:29,900 --> 00:59:26,640

these things are outside of their mean

1498

00:59:31,640 --> 00:59:29,910

and it's just been awesome man I'm

1499

00:59:33,140 --> 00:59:31,650

really glad we could do this I think

1500

00:59:34,910 --> 00:59:33,150

there's a lot of fun stuff to learn

1501
00:59:38,120 --> 00:59:34,920
about within the realm of permaculture

1502
00:59:40,790 --> 00:59:38,130
and a lot of it does touch on many of

1503
00:59:43,280 --> 00:59:40,800
the more wacky THC themes that a person

1504
00:59:45,710 --> 00:59:43,290
might not think about it first there's

1505
00:59:47,720 --> 00:59:45,720
probably more connective tissue than

1506
00:59:49,670 --> 00:59:47,730
they realize and correcting our

1507
00:59:52,340 --> 00:59:49,680
manipulated history is a big part of

1508
00:59:55,010 --> 00:59:52,350
that and also taking responsibility for

1509
00:59:56,420 --> 00:59:55,020
ourselves as well before we really wrap

1510
00:59:57,980 --> 00:59:56,430
this thing up I know your book isn't

1511
00:59:59,630 --> 00:59:57,990
quite done yet but what sort of things

1512
01:00:03,410 --> 00:59:59,640
should we mention your meat subscription

1513
01:00:05,720 --> 01:00:03,420

business again your classes yeah so we

1514

01:00:07,730 --> 01:00:05,730

teach a class if anybody's interested in

1515

01:00:10,430 --> 01:00:07,740

learning more of this land management

1516

01:00:13,130 --> 01:00:10,440

ecology integrating back into nature we

1517

01:00:14,630 --> 01:00:13,140

teach a class every summer we're in the

1518

01:00:16,280 --> 01:00:14,640

process of building a house right now

1519

01:00:19,010 --> 01:00:16,290

once we get that done we're going to be

1520

01:00:22,340 --> 01:00:19,020

able to have a few more course offerings

1521

01:00:25,070 --> 01:00:22,350

we do like timber frame building we cut

1522

01:00:26,510 --> 01:00:25,080

down trees and mill them into big posts

1523

01:00:28,850 --> 01:00:26,520

and beams and then do the old-school

1524

01:00:31,730 --> 01:00:28,860

joinery type building which is pretty

1525

01:00:33,860 --> 01:00:31,740

cool and yeah follow along on our

1526

01:00:36,140 --> 01:00:33,870

website on social media on Instagram or

1527

01:00:38,360 --> 01:00:36,150

Twitter we post a lot and try to be

1528

01:00:40,340 --> 01:00:38,370

educational about helping people figure

1529

01:00:41,870 --> 01:00:40,350

out what we're doing to restore the

1530

01:00:45,380 --> 01:00:41,880

ecosystems and things that they can do

1531

01:00:47,540 --> 01:00:45,390

as well right on all good stuff well

1532

01:00:49,880 --> 01:00:47,550

thanks for being here man and thanks for

1533

01:00:51,950 --> 01:00:49,890

being bold enough to actually be the

1534

01:00:56,950 --> 01:00:51,960

change you want to see in the world hey

1535

01:01:05,020 --> 01:01:02,650

so it goes people and so it goes man

1536

01:01:07,180 --> 01:01:05,030

Peter definitely knows what he's talking

1537

01:01:09,220 --> 01:01:07,190

about it's always nice to give the

1538

01:01:11,109 --> 01:01:09,230

platform to a plus member too because

1539

01:01:13,630 --> 01:01:11,119

they know the tone and the flow of the

1540

01:01:17,430 --> 01:01:13,640

show we can know they're a kindred

1541

01:01:20,770 --> 01:01:17,440

spirit even if we stick to a semi

1542

01:01:22,930 --> 01:01:20,780

off-the-beaten-path path we did get to

1543

01:01:24,940 --> 01:01:22,940

talk a little bit about the esoteric and

1544

01:01:28,329 --> 01:01:24,950

magical side of these things although

1545

01:01:30,670 --> 01:01:28,339

that's not Peters forte poor say he is

1546

01:01:32,920 --> 01:01:30,680

of the mutual opinion that it's in the

1547

01:01:35,620 --> 01:01:32,930

mix of this kind of perspective and

1548

01:01:38,500 --> 01:01:35,630

needs to be injected back into our

1549

01:01:41,829 --> 01:01:38,510

culture and way of life and I say cheers

1550

01:01:45,010 --> 01:01:41,839

to that and I think if I went back 20

1551
01:01:47,380 --> 01:01:45,020
years and told my 14 year old self that

1552
01:01:49,780 --> 01:01:47,390
my job was gonna be putting out a radio

1553
01:01:53,230 --> 01:01:49,790
interview on oak savannas I might've

1554
01:01:56,650 --> 01:01:53,240
just offered myself of what we grow and we

1555
01:01:59,770 --> 01:01:56,660
learn and we find interest in different

1556
01:02:03,370 --> 01:01:59,780
types of things and I'd like to think

1557
01:02:07,000 --> 01:02:03,380
that we pushed our permaculture thread a

1558
01:02:10,000 --> 01:02:07,010
little bit farther downfield and I think

1559
01:02:12,640 --> 01:02:10,010
the wilderness myth in terms of mindsets

1560
01:02:13,780 --> 01:02:12,650
is just a great way to encapsulate it

1561
01:02:16,840 --> 01:02:13,790
all

1562
01:02:19,090 --> 01:02:16,850
and yes it is a more practical show than

1563
01:02:21,760 --> 01:02:19,100

talking about what the shadowy cabal's

1564

01:02:24,340 --> 01:02:21,770

are up to or a deconstruction of symbols

1565

01:02:27,070 --> 01:02:24,350

on the dollar but what are you gonna do

1566

01:02:30,130 --> 01:02:27,080

about that are you gonna redesign the

1567

01:02:32,820 --> 01:02:30,140

dollar is its power over our lives gonna

1568

01:02:35,350 --> 01:02:32,830

diminish because you've decoded it

1569

01:02:37,540 --> 01:02:35,360

obviously we want to keep abreast of the

1570

01:02:40,090 --> 01:02:37,550

esoteric toolbox and what the elite are

1571

01:02:42,540 --> 01:02:40,100

up to that stuff is definitely

1572

01:02:46,240 --> 01:02:42,550

interesting but this stuff is

1573

01:02:48,700 --> 01:02:46,250

potentially life-changing take this clip

1574

01:02:52,420 --> 01:02:48,710

from the first season maybe even the

1575

01:02:56,560 --> 01:02:52,430

first episode of Seinfeld it's one of my

1576

01:03:00,460 --> 01:02:56,570

favorite Seinfeld nuggets of wisdom what

1577

01:03:03,160 --> 01:03:00,470

is the point of all this revenge oh the

1578

01:03:05,400 --> 01:03:03,170

best revenge is living well there's no

1579

01:03:08,200 --> 01:03:05,410

chance of that

1580

01:03:10,720 --> 01:03:08,210

you know self-depreciation is always

1581

01:03:12,580 --> 01:03:10,730

funny to me but do you really want to be

1582

01:03:14,320 --> 01:03:12,590

a George or do you want to be a Jerry

1583

01:03:17,260 --> 01:03:14,330

the one person who has their [h__\h]

1584

01:03:19,630 --> 01:03:17,270

together almost always I'm a big

1585

01:03:22,750 --> 01:03:19,640

Seinfeld guy and I always think of

1586

01:03:24,730 --> 01:03:22,760

Jerry's casual attitude and the insane

1587

01:03:27,520 --> 01:03:24,740

stress levels of the other characters

1588

01:03:30,850 --> 01:03:27,530

and it's because he's well fortified and

1589

01:03:33,580 --> 01:03:30,860

his friends are not and that's just a TV

1590

01:03:36,280 --> 01:03:33,590

show but Peter made a real choice

1591

01:03:39,670 --> 01:03:36,290

to take a tougher path but he's

1592

01:03:42,850 --> 01:03:39,680

definitely more fortified than I am I'm

1593

01:03:45,190 --> 01:03:42,860

doing quite well but my entire empire is

1594

01:03:48,610 --> 01:03:45,200

built on the shaky ground of the digital

1595

01:03:52,810 --> 01:03:48,620

world and the network of currency

1596

01:03:55,690 --> 01:03:52,820

exchange and I'm just one EMP blast away

1597

01:03:57,550 --> 01:03:55,700

from total ruin when I really think

1598

01:04:01,090 --> 01:03:57,560

about how many steps there are between

1599

01:04:05,660 --> 01:04:01,100

me and the firsthand quality meet that

1600

01:04:07,490 --> 01:04:05,670

Pierre produces I do get nervous

1601

01:04:10,759 --> 01:04:07,500

I think we should all consider our

1602

01:04:14,180 --> 01:04:10,769

supply chains and how to shorten them

1603

01:04:16,130 --> 01:04:14,190

and up the quality of them in the same

1604

01:04:19,819 --> 01:04:16,140

way a family plans for how to escape

1605

01:04:22,940 --> 01:04:19,829

their house in a fire scar was right you

1606

01:04:25,009 --> 01:04:22,950

gotta be prepared and one thing I did

1607

01:04:27,559 --> 01:04:25,019

realize when I did start to have some

1608

01:04:29,569 --> 01:04:27,569

unconventional successes oh the

1609

01:04:31,880 --> 01:04:29,579

Rothschilds and Rockefellers and the

1610

01:04:33,789 --> 01:04:31,890

Archon attached oligarchs they aren't

1611

01:04:36,589 --> 01:04:33,799

literally holding me down

1612

01:04:38,269 --> 01:04:36,599

yeah they built an uphill system it's

1613

01:04:40,190 --> 01:04:38,279

very difficult to climb they're dumbing

1614

01:04:41,569 --> 01:04:40,200

us down and they sold us a false stream

1615

01:04:44,329 --> 01:04:41,579

that it could be achieved by working

1616

01:04:45,829 --> 01:04:44,339

within their companies but if I stopped

1617

01:04:46,910 --> 01:04:45,839

one of them on the street and said hey

1618

01:04:50,660 --> 01:04:46,920

[h__\h] you buddy

1619

01:04:53,450 --> 01:04:50,670

I made it they'd probably just say how

1620

01:04:56,390 --> 01:04:53,460

cute what a good boy you are and go

1621

01:04:59,089 --> 01:04:56,400

about their day they are steering

1622

01:05:02,029 --> 01:04:59,099

cultures and nations and they don't care

1623

01:05:04,279 --> 01:05:02,039

about outliers or how high you climb if

1624

01:05:06,920 --> 01:05:04,289

they still have the masses and they're

1625

01:05:09,049 --> 01:05:06,930

always going to I wish it was different

1626
01:05:13,220 --> 01:05:09,059
but you can't control what other people

1627
01:05:15,259 --> 01:05:13,230
do so similarly I'm never gonna get to

1628
01:05:17,599 --> 01:05:15,269
give the puppet masters a piece of my

1629
01:05:19,940 --> 01:05:17,609
mind or a piece of anything else for

1630
01:05:23,200 --> 01:05:19,950
definitely building structures that have

1631
01:05:27,529 --> 01:05:23,210
influenced my life in a negative way but

1632
01:05:30,109 --> 01:05:27,539
instead I could better insulate myself

1633
01:05:33,650 --> 01:05:30,119
better fortify myself from the tyranny

1634
01:05:38,200 --> 01:05:33,660
of the system succeeding in it is one

1635
01:05:40,810 --> 01:05:38,210
thing not needing it is even better

1636
01:05:43,330 --> 01:05:40,820
so I just keep saying Ill because I

1637
01:05:46,690 --> 01:05:43,340
don't want this to be preachy towards

1638
01:05:49,000 --> 01:05:46,700

you we can just use me as an example but

1639

01:05:52,390 --> 01:05:49,010

yeah I overcame a part of it I got out

1640

01:05:56,230 --> 01:05:52,400

of the shitty corporate nine-to-five I

1641

01:05:58,570 --> 01:05:56,240

got rid of bosses I got rid of economic

1642

01:06:01,450 --> 01:05:58,580

and life fulfilment stress and got some

1643

01:06:05,020 --> 01:06:01,460

of my time back but I have done almost

1644

01:06:07,620 --> 01:06:05,030

nothing to live well by the right

1645

01:06:10,150 --> 01:06:07,630

standards by the independent standards

1646

01:06:12,100 --> 01:06:10,160

you know the whole thing of just not

1647

01:06:15,100 --> 01:06:12,110

needing their system circumventing it

1648

01:06:16,740 --> 01:06:15,110

and so I'm willing to take a little risk

1649

01:06:20,470 --> 01:06:16,750

that maybe content-wise

1650

01:06:23,170 --> 01:06:20,480

this isn't a super exciting episode when

1651

01:06:25,630 --> 01:06:23,180

you see the title but I really do care

1652

01:06:28,180 --> 01:06:25,640

about fighting this system and giving

1653

01:06:31,090 --> 01:06:28,190

the people who listen some tools and

1654

01:06:33,520 --> 01:06:31,100

resources rather than just some

1655

01:06:35,110 --> 01:06:33,530

provocative conspiratorial speculation

1656

01:06:38,980 --> 01:06:35,120

about the capstone cronies of the big

1657

01:06:40,750 --> 01:06:38,990

pyramid instead maybe you should work

1658

01:06:44,590 --> 01:06:40,760

towards being the head of your own

1659

01:06:46,330 --> 01:06:44,600

pyramid it's how they would think so

1660

01:06:48,310 --> 01:06:46,340

that's my thoughts on it big thanks to

1661

01:06:50,590 --> 01:06:48,320

Peter for sharing his story and his

1662

01:06:53,530 --> 01:06:50,600

insights but I also have a bit of an

1663

01:06:55,450 --> 01:06:53,540

announcement to make on his behalf when

1664

01:06:57,760 --> 01:06:55,460

we recorded this his meat business was

1665

01:07:01,000 --> 01:06:57,770

only set up inside of a very limited

1666

01:07:03,190 --> 01:07:01,010

local range but you know that I've

1667

01:07:06,520 --> 01:07:03,200

talked to you guys about butcher box on

1668

01:07:08,680 --> 01:07:06,530

other health food related episodes and

1669

01:07:10,390 --> 01:07:08,690

how I use them to get my meat I think

1670

01:07:14,020 --> 01:07:10,400

it's a lot better than most of my

1671

01:07:16,510 --> 01:07:14,030

options but a small farm that really

1672

01:07:19,420 --> 01:07:16,520

cares for these animals uses rotational

1673

01:07:21,370 --> 01:07:19,430

grazing and seems about as close to the

1674

01:07:25,120 --> 01:07:21,380

purest and simplest way to do these

1675

01:07:27,460 --> 01:07:25,130

things is even better and I am happy to

1676

01:07:29,710 --> 01:07:27,470

say I happened to have been Peters

1677

01:07:32,530 --> 01:07:29,720

guinea pig it doesn't get much further

1678

01:07:35,080 --> 01:07:32,540

for him than San Diego and he was kind

1679

01:07:38,140 --> 01:07:35,090

enough to send me a care package of meat

1680

01:07:40,960 --> 01:07:38,150

and it was really awesome the packaging

1681

01:07:43,390 --> 01:07:40,970

was great the labeling was great those

1682

01:07:45,760 --> 01:07:43,400

things are important to a degree but the

1683

01:07:49,210 --> 01:07:45,770

meat itself was excellent too we had

1684

01:07:51,330 --> 01:07:49,220

bacon sausages a nice big hunk of meat

1685

01:07:54,720 --> 01:07:51,340

my wife made maybe it's a roast

1686

01:07:58,520 --> 01:07:54,730

I'm pad with detailed meet terms but we

1687

01:08:00,720 --> 01:07:58,530

got like 12 pounds of beef and pork

1688

01:08:03,780 --> 01:08:00,730

really excellent stuff

1689

01:08:05,520 --> 01:08:03,790

the point is kudos to Peter for really

1690

01:08:10,440 --> 01:08:05,530

making the best out of this opportunity

1691

01:08:11,850 --> 01:08:10,450

and rolling out a national plan for his

1692

01:08:13,650 --> 01:08:11,860

meat subscription business and I'm

1693

01:08:16,320 --> 01:08:13,660

really happy to be able to bring you

1694

01:08:18,809 --> 01:08:16,330

that resource as well because I doubt

1695

01:08:22,050 --> 01:08:18,819

many of us have a great meat guy and

1696

01:08:25,020 --> 01:08:22,060

this would be a really solid option if

1697

01:08:27,270 --> 01:08:25,030

you don't as I mentioned Peter is aware

1698

01:08:28,710 --> 01:08:27,280

of butcher box we examine these things

1699

01:08:32,160 --> 01:08:28,720

when we're gonna go into the market and

1700

01:08:34,800 --> 01:08:32,170

as he said their box can vary a little

1701

01:08:36,570 --> 01:08:34,810

bit but it's around 8 to 10 pounds of

1702

01:08:39,870 --> 01:08:36,580

meat for a hundred and fifty dollars

1703

01:08:42,420 --> 01:08:39,880

where his is 12 pounds for a hundred and

1704

01:08:45,240 --> 01:08:42,430

sixty dollars so there's definitely a

1705

01:08:48,480 --> 01:08:45,250

bit more bang for your buck with Peter

1706

01:08:51,240 --> 01:08:48,490

and he's THC in her circle that's gotta

1707

01:08:53,460 --> 01:08:51,250

count for something - personally I

1708

01:08:56,130 --> 01:08:53,470

really like getting my meat by mail this

1709

01:08:58,559 --> 01:08:56,140

way it forces me to eat from home and I

1710

01:09:00,059 --> 01:08:58,569

just got to go get some side veggies and

1711

01:09:02,940 --> 01:09:00,069

to steam some broccoli and cook up a

1712

01:09:05,550 --> 01:09:02,950

couple steaks that's easy for even me to

1713

01:09:07,260 --> 01:09:05,560

do so maybe for you guys who don't cook

1714

01:09:11,940 --> 01:09:07,270

all that much treat your partner to a

1715

01:09:15,120 --> 01:09:11,950

good meal with probably the most natural

1716

01:09:16,950 --> 01:09:15,130

meat you have available to you consider

1717

01:09:18,809 --> 01:09:16,960

giving it a shot Peter really has taken

1718

01:09:20,460 --> 01:09:18,819

a chance here we didn't even mention

1719

01:09:21,870 --> 01:09:20,470

that you could get it during the

1720

01:09:24,510 --> 01:09:21,880

interview because you really couldn't

1721

01:09:26,610 --> 01:09:24,520

then and I just see it as a win-win for

1722

01:09:29,579 --> 01:09:26,620

everyone if you were to pick up a box

1723

01:09:33,240 --> 01:09:29,589

for you and yours just go to Mastodon

1724

01:09:35,400 --> 01:09:33,250

Valley Farms calm and look for meat CSA

1725

01:09:38,040 --> 01:09:35,410

underneath shop he's got a couple

1726

01:09:41,579 --> 01:09:38,050

different packages and big thanks to him

1727

01:09:43,800 --> 01:09:41,589

for doing all that also keep in mind

1728

01:09:46,950 --> 01:09:43,810

that in higher side news the joint

1729

01:09:48,599 --> 01:09:46,960

session is on the 25th at 7 p.m. Pacific

1730

01:09:50,550 --> 01:09:48,609

this month come talk to me and other

1731

01:09:53,520 --> 01:09:50,560

listeners and share your stories it's

1732

01:09:55,380 --> 01:09:53,530

definitely a nice hang also keep in mind

1733

01:09:57,330 --> 01:09:55,390

that the higher side overhaul is

1734

01:09:58,920 --> 01:09:57,340

underway the free and plus sites will be

1735

01:10:01,410 --> 01:09:58,930

coming together and the whole

1736

01:10:04,580 --> 01:10:01,420

infrastructure is getting a big modern

1737

01:10:06,050 --> 01:10:04,590

facelift in the next four to six weeks

1738

01:10:08,240 --> 01:10:06,060

of course I would love for you to sign

1739

01:10:11,390 --> 01:10:08,250

up for the higher side chats plus and

1740

01:10:13,399 --> 01:10:11,400

enjoy the second hour of all my shows I

1741

01:10:16,550 --> 01:10:13,409

think it's worth it for what I try to

1742

01:10:20,780 --> 01:10:16,560

bring you every episode and this one the

1743

01:10:23,359 --> 01:10:20,790

second hour gets into using nature as a

1744

01:10:25,939 --> 01:10:23,369

technological template how indigenous

1745

01:10:27,020 --> 01:10:25,949

attitudes about spirits filter through

1746

01:10:29,689 --> 01:10:27,030

their everyday lives

1747

01:10:31,399 --> 01:10:29,699

what independent farmers deal with when

1748

01:10:33,859 --> 01:10:31,409

budding up against the system

1749

01:10:36,350 --> 01:10:33,869

the off-the-grid elements of Peters farm

1750

01:10:38,660 --> 01:10:36,360

and lifestyle how to make a farm

1751

01:10:41,450 --> 01:10:38,670

profitable and tweaking our idea of

1752

01:10:43,729 --> 01:10:41,460

wealth just how different the meat from

1753

01:10:46,700 --> 01:10:43,739

ethnically treated animals is from

1754

01:10:49,310 --> 01:10:46,710

factory farmed meat and what the future

1755

01:10:51,919 --> 01:10:49,320

looks like for America's resources and

1756

01:10:54,470 --> 01:10:51,929

the extent of the damage we've done as

1757

01:10:57,050 --> 01:10:54,480

well as the methane myth that was great

1758

01:10:59,780 --> 01:10:57,060

too for that vegan argument that cows

1759

01:11:03,410 --> 01:10:59,790

are putting out more greenhouse gases

1760

01:11:06,050 --> 01:11:03,420

than the system can support he gives a

1761

01:11:08,359 --> 01:11:06,060

great counter-argument to that so please

1762

01:11:10,790 --> 01:11:08,369

support the show you love and get all of

1763

01:11:12,560 --> 01:11:10,800

it because you love it and I think our

1764

01:11:14,570 --> 01:11:12,570

guests say so many great things that I

1765

01:11:17,810 --> 01:11:14,580

know I'd want to hear it all without any

1766

01:11:20,089 --> 01:11:17,820

breaks or ads so that's that and I'll

1767

01:11:22,570 --> 01:11:20,099

see you next time big thanks again to

1768

01:11:25,280 --> 01:11:22,580

Peter Allen of Master Don Valley farms

1769

01:11:27,709 --> 01:11:25,290

your move corporate food producing

1770

01:11:30,290 --> 01:11:27,719

parasites glyphosate crops ochres and

1771

01:11:32,919 --> 01:11:30,300

evil entities involved in the limitation

1772

01:11:37,480 --> 01:11:32,929

and quality reduction of our food supply

1773

01:11:47,710 --> 01:11:43,070

they built a little Empire out of some

1774

01:11:53,150 --> 01:11:47,720

crazy garbage called the blood on the

1775

01:11:57,440 --> 01:11:53,160

exploited working class but they've

1776

01:12:02,410 --> 01:11:57,450

overcome their shyness now we're calling

1777

01:12:10,010 --> 01:12:02,420

them your highness and the world screams

1778

01:12:14,390 --> 01:12:10,020

save me THC they destroyed the bonds of

1779

01:12:19,220 --> 01:12:14,400

friendship and respect between the only

1780

01:12:21,250 --> 01:12:19,230

people left who'd even look them in the

1781

01:12:25,610 --> 01:12:21,260

eye

1782

01:12:30,320 --> 01:12:25,620

now they'll laugh and make a fortune of

1783

01:12:34,640 --> 01:12:30,330

the same ones that they tortured and a

1784

01:12:45,080 --> 01:12:34,650

world screams save me THC

1785

01:13:03,840 --> 01:12:52,770

Jesus so far away now we are the only

1786

01:13:10,290 --> 01:13:03,850

one who can tell me if it's true and our

1787

01:13:14,940 --> 01:13:10,300

chance to they built a little Empire out

1788

01:13:20,370 --> 01:13:14,950

of some crazy garbage called the blood

1789

01:13:25,479 --> 01:13:20,380

of the exploited working class

1790

01:13:28,300 --> 01:13:25,489

but they've overcome their shyness now

1791

01:13:33,840 --> 01:13:28,310

we're calling them your highness