**CONFIDENTIAL**

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Interviewer(s):

Respondent(s):

**INT: So the first question is, how long, and we’ve touched on this already, how long have you been doing any recording, and how did you start?**

P19: Right, well, I suppose the first thing that stimulated my interest in natural history was that my father was interested in natural history. He was an amateur microscopist. So this would have been, I suppose, around late 1940s, very early 50s. He and his mates would go off at the weekend, and I remember my mother used to give them cheese sandwiches to take with them. Of course, I wanted to go but I could not, so I amused myself by, well, pottering around the garden, collecting beatles, to begin with.

Now that started off because my father, he was Secretary of the [science society], so sometimes on a Saturday, he would go into the [CITY] museum where they had a committee meeting, I suppose, and on one or two occasions, he took me with him and I was passed over to Mr [Name], as I called him. It’s actually [Name] of [unclear 00:01:23] and [NAME], the very famous entomologist, who sort of looked after me and took me around the back of the museum and opened all the- I remember he had to carry me so that I could look into the jaws of all the wonderful beetles and so on. So that got me started with beetles, and so I had this general interest in what, you know, I could see around me. For example, I’ve recently done a training course, a training Zoom thing, a couple of weeks ago for [wildlife charity], on how to identify butterflies and how to do transects, you see, and I said then, one of my earliest childhood memories, well I remember being carted around by [NAME], but it was first time I saw a male Orange Tip butterfly. It impressed me so deeply, I could take you to the precise-

**INT: Really?**

P19: -almost 10 metre square, where I saw it by this stream in the [NATIONAL PARK], you see. So and then when I was at school, we were encouraged in the sixth form to do some research projects. I thought, well, what will I do? What group of animals do people dislike most? So I decided to do something on slugs [laughs], and actually, what I decided to do was try to find out how slug activity and behaviour was influenced by weather conditions at night time. So I was actually, then, for the first time, started doing proper recording and collecting of data, and analysing it and that sort of thing, and then I suppose I’ve always been interested in insects and so on and I suppose, and this may be, I suppose, relevant to the things that you’re trying to pursue. Some time, I suppose it was probably around about- it would have been in the, probably, early 1980s, it sort of dawned on me really forcefully, that we needed to start having quantitative information, because things were changing. So at that point I started counting moths on a regular basis, and also butterfly recording as well, although less formally.

With molluscs, I’m still into molluscs, which isn’t relevant to you, of course, like I’m Chair of the [nature society], but in the field, we very rarely count. It’s very difficult to be quantitative with molluscs, which it’s mainly presence or absence, but with moths, you know, now, since the sort of mid 80s, I’ve really been trying to be quantitative, and I think the thing that’s really clicked with me, and I’ve been banging on about this, basically, for about 20 years to anybody who will give me enough time, is that there’s a generation of people to which I belong, that when we are gone, nobody’s really going to have a proper memory of what wildlife and biodiversity was like in this country before the massive agricultural intensification and building developments, slum clearance, building estates in the countryside, all that sort of thing, which started, it all started really in the 1950s.

Now I should think anybody who’s more than 10 years younger than me will not have experienced that, and the story that I most usually tell, is that I can remember, as a small boy, after I’d had my bath, standing on a stool in the bathroom and my mother towelling me down, so I would have been quite young to be not able to bath myself, probably five or younger, and I can remember on the bathroom window, it was a sort of like that pebbly type glass that they used to have in bathrooms, so the light came through but people couldn’t see you or anything like that. I can remember in the dark outside, all the different shapes, sizes and colours of moths fluttering on the outside of the window. Now if I was young, and in those days, we didn’t have television, so kids went to bed earlier than probably they do usually now, probably in bed by seven o’clock at night or something, for it to have been dark enough for me to be seeing these moths, say it’s seven o’clock in the evening, it must have been either early spring or autumn, to be dark by that time of night, and there were these hoards of moths flying.

Well now, you’d just, even in the height of summer, you don’t see moths on windows like that. Other people talk about, you know, when you’d sort of go for a nighttime drive back in those days, you had to clean the windscreen and headlights afterwards. Well you don’t have to now.

So one of the things that’s sort of, has particularly driven me, particularly when I retired, was concern that there was really too much of a lack of interest in wildlife, particularly amongst the young. So I try and help with the Natural History Society at the university, by taking students out to field meetings and that sort of thing.

That doesn’t really exist any longer, I don’t think, that society, and also, trying to tell people like, okay, well if you remember what it was like in the 1960s or 1970s, in actual fact, that’s not really an adequate baseline, you know, against which to compare the lack of wildlife, for lack of a better word, that we have these days.

I mean, in the world of slugs for example, we have about twice as many species of slugs in the country now as we had, say, in the 1960s, but that’s because of invasions, which have been brought about by us being more mobile and everything, and bringing goods in from abroad. I mean there’s new species sweeping the country at the moment, with slugs, but yes, so things have changed greatly, and I think there’s fewer and fewer of us, now, who really know how badly things have changed, and to some extent, there is a lack of information, quantitative information. It doesn’t really go back far enough. The [unclear 00:08:13] insects survey scheme really only started off properly in the 1960s, you see, and I don’t know whether you’ve come across a book called Porritt’s Lists? This is-

**INT: Yes, yes.**

P19: -on moths. Well I did the macro-moths side of that. This is going back to the Victorian literature, and one of the things that really, really impressed me was, not only whilst there were a lot of moth activity, but it wasn’t sort of quantitative recording at all in those days, and although the lists that we worked at were spread over about a 30, 35 year period in three different publications, the emphasis was on changes in the frequencies of colour moths or finding colour rarities of moths, and there was no commentary at all on any changes of species abundance, whatsoever. So-

**INT: Is that because that was just not a concern at that time?**

P19: I don’t think it was a concern, and also, they didn’t have the methods, you see. I mean, they did incredibly well, given the techniques available at their hands in the 19th century. I mean, they might have got the odd moth coming to a gas light or something like that, but most of it was done by going out at dusk, sugaring trees, using sweet [s/l netted 00:10:00] dust, sugaring trees, taking larvae, in particular, and rearing them, and fantastically good levels of communication among individuals, I should think, largely via postcards.

**[00:10:17]**

The postcards were great in those days. You could send a postcard off in the morning, it probably got to the recipient in the evening of the same day, you know. It cost a fraction of what it costs now [laughs]. But there was no real interest at all in numbers.

So I remember Porritt would be terribly enthusiastic by finding a black version of a moth, you know, a melanistic version, and that would get great comments, but nothing about changes in frequency over time, and of course he had the length of time in order to observe changes in frequency and comment on them. Either they weren’t happening or they just weren’t interested.

Have I answered the- I can’t remember what question you asked me-

**INT: Yes. It’s okay.**

P19: I’ve been rabbled on as I tend to [laughs].

**INT: So when did you actually- so you spoke about your sixth form project, where you were studying slugs, but were you passing those records onto anybody at that time? When did you kind of start formally passing your records into the system?**

P19: Right, okay, well there was one very early mapping schemes was organised by [Name] at [UNIVERSITY], it was a mollusc, a land and freshwater mollusc mapping scheme, so I contacted him, and in those days, it was really presence and absence by 10 kilometre squares. When I was tidying up- so I filled in the record cards and sent them off, so I was interested, certainly, in distribution. There wasn’t any scope for commenting on abundance, except for rarer species, where you could fill in a special pink card and send that off. And when I was tidying up my office, and I retired by stages over a period of time, I found at the back of one of my filing cabinets, my old field notebooks from when I was at school and when I was at university, I was still out recording molluscs and so on, for the mapping scheme. I recorded everything to six figure grid references and I actually, when I rediscovered them, I got out, I annotated all the records, put them in a spreadsheet and sent them to the National Recorder, and interestingly, we had the AGM, by Zoom, of the Conchological Society of Great Britain last Saturday afternoon. We had to have minute’s silence at three o’clock of course [laughs], and there was a plea for anybody who had participated in that, a long time ago, 10km square mapping scheme, if they’d still got their original field records with grid references and so on, please do send them in now. Well I did that a long time ago, because I- I don’t know why, I think I’m just I’m interested in where places are. I’ve always been interested in maps and things like that, so it was natural for me, even that long ago, to actually take a grid reference off a map and-

**INT: So had they- they’d retained the records at 10k resolution, but they’d lost the finer resolution-**

P19: They ‘d never had it.

**INT: They’d never had it? Okay.**

P19: They’d never had it-

**INT: So that’s what they were after, yes.**

P19: Because we were given record cards, just sent out record cards, just to tick for each species and you put at the top, the 10km square thing, but it was something really important then, as I say, the pink card where you’d put the fuller details. And in fact, those record cards were held at Biological Record Centre as, and this was one of the very first mapping schemes, and what they’re trying to do now is contact people and see if they can actually provide the finer detail information within the 10km squares.

**INT: So at that time, did you have an area that you were hoping to cover each 10k square in? Were you being quite methodical in terms of trying to get records in different squares?**

P19: It was, I didn’t have transport, so it was really within cycling, walking or public transport. So sometimes I would sort of go off for a day to an area, but you couldn’t really travel around to the extent that you can do now.

**INT: I’ve lost the sound for some reason.**

P19: Oh, I can hear you.

**INT: Oh, there we go, you’re back [laughs].**

P19: So no, I wasn’t attempting to be systematic in my coverage, although the actual, what started off mollusc thing, as I say, the project for school, it was in my back garden, my parents’ back garden, that I did that work, which actually, eventually led to recommendations that were sort of actually published for farmers because molluscicidal pesticide baits, that we don’t use any longer, but this was back in the 1960s, were quite expensive to apply on the agricultural scale, and what my work showed was by taking a warmer night with a higher, sorry with a lower vapour pressure deficit, you could greatly increase the kill of slugs for a given amount of pellets.

**INT: Oh wow.**

P19: Nasty pellets put on the ground [laughs]. We didn’t think- the nastiness was not a consideration, except that they killed molluscs [laughs].

**INT: [laughs] So you very much started on the slugs then, and then how did you change your recording, in terms of the species groups that you were recording and the type of recording you were doing?**

P19: I’ve been interested- I’ve always been a bit of an entomologist since I was a child and always had this interest in butterflies, and to some extent moths, particularly ones you saw in the daytime, and I suppose it was sort of around about 1980 that I started taking a bigger interest in moths.

I remember going out at nighttime with a torch to buddleia bushes and finding these Large Yellow Underwings and thinking, oh, they’re big and lovely, yes, they’re nice, not realising until I got a- I think I got a light trap about 19, mid 80s I guess, that in actual fact, Large Yellow Underwings are a plague because there’s so many of them [laughs], and I started pretty, quickly, thinking that I needed to count what I was getting. I guess it was probably out of, just part of my natural interest in them.

I mean, I’ve always been the sort of chap that sort of counts and keeps records of all manner of things, and then on the butterfly side, I was keeping casual notes on what I’d seen where, and it was really a chap called [Name], a long time, still quite a long time ago, he was talking to me and he said, “Do you keep a proper record of your counts?” and I said, “Well not really, it’s really sort of a record of what I’ve seen rare,” and he said, “Well, you really ought to be keeping proper quantitative records of things,” and I remember saying to him, “Really? Are people interested in butterfly numbers and that sort of thing?” And he said yes, so that got me sort of being more quantitative, still casual recording rather than monitoring, and then of course a big thing that greatly influenced me was in the latter 1980s, I got involved with a- did you ever meet a chap called [Name]? He was in the biology department and went off to be Chief Scientist for [nature organisation].

**INT: The name rings a bell but not more than that, I don’t think.**

P19: He asked me to join him in putting in a grant application for [unclear 00:19:33] for a project called [conservation project], so I did so, and they got a research assistant on the project and the idea was to do a survey of all wildlife recording going on in the United Kingdom, to identify what recording activity was being carried out regularly enough for example, and various other criteria had to be fulfilled, so that the data being collected could form the basis of annual statistics, rather like the retail prices index, but for wildlife, and habitats as reflected in wildlife monitoring, for the government.

**[00:20:34]**

So the first part of the project was a massive survey of all recording activity going on, and this lad, [Name] [phonetic 00:20:47] who did the groundwork for us, he was going all over the country interviewing people and so on, and then we came up with recommendations as to the schemes that were worth closer scrutiny.

There were a whole load of criteria that had to be met. They had to be monitoring rather than casual recording of course, and so then we tendered for phase two of the project, which was to investigate the ones which looked the most promising schemes and do some analysis on data and support back, again to the government, department of the environment.

[Name] had left to go up to Scotland as [Scientist], so I ended up sort of running the show. [Name] [unclear 00:21:39], I don’t know if you’ve ever met [Name] [unclear 00:21:41]? She was a research assistant on that second part. So we focused in on red and grey squirrels, rare plants, the Rothamsted Insect Survey for moths, the Butterfly Monitoring Scheme for butterflies, otters and then of course birds. There were several bird schemes as well, and we were to report on each one. And this was a very interesting time, because not only was the government waking up to the problems with British wildlife and habitat, but climate change.

So at the start of this project, Thatcher was Prime Minister at the time, and nobody was terribly taking climate change seriously, then the Rio conference happened and suddenly the government and the civil service became more alert to possible climate change as well. So the reports that we wrote actually included quite a bit of the early consideration of what climate change could do to you know, causing ecological interactions which had evolved gradually over a long period of time, how they could fall apart, you know, as a result of rapid change due to climate change.

It’s quite an interesting experience, I mean the Rothamsted Insect Survey clearly was a large, very carefully managed scheme, then I did quite a bit of analysis of various example species for the report, and so we recommended moths and the reaction from the civil servants was, oh no, butterflies are much better, people like butterflies, they don’t like moths. And anyhow, I remember him saying to me, “Anyhow, it’s well known, [NAME], you’re far too enthusiastic about moths.” [laughs] So little butterflies was the thing they really wanted to support. In a sense I think the butterfly, the [unclear 00:24:07] [wildlife charity] took moths within their brief as well, and then they got the big funding for the national moth recording scheme, which has led to the atlas now. Of course, it's all changed, you know, hoards of people are interested in moths now.

**INT: Yes.**

P19: So again, you see, being involved in that project, particularly the first part, where we had to survey the whole recording, surveying, monitoring activity across the United Kingdom, I mean, I learnt an awful lot about what was going on. So I was already- got broad interest but knowledge broadened from sort of being involved in that.

**INT: So seeing the relative value of different schemes, through that then, did that then target your own behaviour in terms of starting to do transect recording and things like that?**

P19: Not in the most direct way. I suppose, well, no, the with respect to moths, what happened was, in 1989 we moved from [NEIGHBOURHOOD] to the house we’re in now, and it was immediately obvious to me that it was a jolly good site for moths, and one was always trying to think up projects for undergraduates, and it had become acceptable by then, that a biology project could involve handling of data rather than [s/l washing up glassware 00:25:42] all your time [laughs].

**INT: [laughs]**

P19: So I settled back, from the moment we arrived in this house, I decided I was going to put my moth trap, my moth trap out, every night that I possibly could, and count properly and identify everything in it, to gradually accumulate a set of data that could be a sandpit for students who were interested in playing around with data, and I suppose I started offering projects based on it, I suppose after about seven years, you know, very early days. I mean, we’ve been here 32 years now, so it’s quite a big data set.

Many, many students dabbled in my data and for some of them, it changed their attitude to the things they were interested in. So for example, I think immediately of one woman, she is now, decided to become a statistician as a consequence, and is now one of the big statisticians in the [GOVERNMENT DEPARTMENT] for example, and messing about with my moth data [unclear 00:26:53] that, obviously. So yes-

**INT: And so were you submitting those records to the national scheme as well, then, at that point?**

P19: Yes, well, there’s a very, very long and fairly complicated history. The first in [COUNTY], I suppose, nationally with moths- Yes, okay, just getting my mind working. With moths, Biological Record Centre, [NAME], they started off a moth recording scheme where data became centralised, and that, the maps, the early maps, they were produced in the series of books, Butterflies and Moths of England and Ireland. Are you familiar with the series?

**INT: What sort of time period are we talking about?**

P19: Oh, good question. I think this is probably the first one to come out.

**INT: Okay yes, yes, yes.**

P19: This came out in the eighties. I think volume six on [unclear 00:28:17] will probably never appear [laughs]. The last one was the [unclear 00:28:20] micro moths, that came out about three years ago. So there’s- up there, you see.

**INT: Okay.**

P19: So the maps, the very early maps were coming out in these books. So that was Biological Record Centre were collating the data. It was pretty much on an ad hoc basis thing. Well, we had county moths recorders, and I suppose the information was being fed through them back to Monkswood and then they would send out draft preliminary dot maps and they would be photocopied and passed out on a who do you know basis to people, to see if they could add any more information and so on.

It’s so long ago, yes, so we had counting moth recorders for many counties, and I think they were the funnel through who the information got to Monkswood. Then in [COUNTY], are you a member of the [WILDLIFE ORGANISATION]?

**INT: Not any more, no.**

P19: Okay-

**INT: Everything lapsed for me when I had children [laughs].**

P19: Yes, I understand, yes indeed [laughs]. One of the leading lights of butterflies and moths in [COUNTY] recently died, [Name], who got one or two of us together to write a thing for The Naturalist about- and I wrote about the [species], the [COUNTY] [species] Group, the history of it, which he really started off in the mid 80s.

**[00:30:10]**

Now the idea of that was to collate information on butterflies and moths and produce a book. [Name]’s book was produced for Yorkshire, okay, and then other counties also started doing similar activities.

So on the national thing, there was the books that had been coming out of the Monkswood. Counties were sort of doing their own things as well. So after the Butterflies and Moths of [COUNTY] was published 1989, after they’d set up this [COUNTY] [species] study group, to get that off the ground, I became Chair of the [species study group] shortly after that, and we started holding our meetings in the old library-

**INT: Oh did you?**

P19: -in the biology department on Sundays, in the days where you could have doors open and things like that [laughs], and we went through this period in the 1990s which was, it was a terrible struggle for us because computing facilities were becoming more widely available and the BBC micros appeared on the scene around about 1983, ’84. So we recognised the need to try to collate our county records, and we had, I suppose, probably three or four attempts to do that, which ultimately were aborted because the technology started advancing fairly quickly in the latter 1980s, once IBM started producing home computers and that sort of thing, and the Apple Macs got going as well.

So there were one or two really quite gifted people who put a lot of time into trying to develop methodology that we could use, that effectively fell by the way side, and what made the big difference in Yorkshire and many other counties, was the appearance of MapMate, and so I mean, I’m about to go through the 150,000 records on MapMate on my own records.

**INT: Wow.**

P19: But the big thing about MapMate is it enables individuals in the group to exchange information easily. So [Name] became our county recorder, I guess about early 2000s, mid 2000s probably, and the [species] study group became affiliated both with [wildlife charity] and with [NATURALIST GROUP], and we set up this joint recording scheme, which we still have now, based upon the vice county recorders and central county recorder, and it has really worked very well for [COUNTY].

I remember we had a series of meetings held at my house back in the 2000s about how we should go about producing a second edition of the Butterflies and Moths of [COUNTY], because we were starting to much better collate the data on an annual basis, and we didn’t make any progress, really, because half the- there’s only a smallish group of us, and half of us just thought we should produce another book, and the other half of us thought, no, you know, it will get out of date. We need to be thinking about trying to do something online, because that was beginning to become available, and ultimately, we produced, well, [NAME] produced the butterfly- the moth recording online system that we have, but that has fallen out of use from about 2015 because of the change to Windows 10, has made it difficult to keep that going.

The other- and on the butterfly side, there was less of an inclination to centralise information and certainly to disseminate it. The data was thought to have possible monetary value, and therefore should not be released, except in a very summarised form, and all that has changed very much over the last 18 months or so. So that’s my experience on the [species] side. Have I answered your questions? I don’t know that I have.

**INT: Yes. So now, when you’re kind of deciding where to do your recording, do you use you, you know is it putting dots on maps? Is it filling gaps, or-**

P19: Okay, I will go to areas where there is a lack of information, and one of the things that- it’s become possible to sort of get that sort of information, both on- easily with the moths and more recently easily with the butterflies as well, because for the last few years, well, the butterfly information is on a five, a quinquennial basis. You have five years of recording and then it starts again. Now I’m talking about the casual recording, not the transect monitoring, and so for a few years there have been maps produced, I think- I can’t remember whether they were on the tetrad basis of 10 kilometres square basis, but the colour of the dot or the absence of a dot will show you how many species have been got for that area.

So for example, the last time I reacted to that was just before- it was the year before Covid kicked in. There was an obvious absence of butterfly records in the A1 corridor, up towards, well, around the [TOWN] area. So I spent a couple of days in that area just driving around, looking for places to stop the car and have a wonder around and just recording butterflies, and you can normally see why there would be gaps in the data. I mean, it was an agricultural desert, so you were hunting for a reasonable road [unclear 00:37:57] or a little clump of tress that you could get into, and that sort of thing, but by and large it was just arable agriculture.

So I’ve always been keen to help in that sort of way, and I’ve always been rather dismissive of the sort of going back to the honey pot site every year and just recording the same thing again, and a lot of people are doing that, and taking nice photographs and sticking them on Facebook and that sort of thing. Now obviously, there needs to be monitoring of rare species at their sites and that sort of things, but I think just going again to take a few photographs of the same species and stick them on Facebook and not so much now, but once upon a time, there was a sort of, there was an added feel to it, like, I know where to find such and such and I’ve been there and I got a photograph to prove it and all your poor people are looking at my photograph can’t do that sort of thing. That’s less common now.

I always rather thought that time could be better spent going to areas you haven’t been to before, because you might actually find something useful, newly useful, by doing that, and I don’t linger to take photographs of things when I’m out in the field, unless it’s something very special. I think I can spend my time far better by moving on and doing more recording. I mean one of the-

**INT: And is it those maps that you’re using to decide where to go when you’re making decisions like that?**

P19: Well yes. On some occasions, I have used those maps, so I’ll target this area, go off for a day, and drive around that area and just, you know, even a large white is probably a new record.

**[00:40:01]**

But they don’t have the gaps now that we did used to have, because there’s more recording effort going on anyhow. There’s far more people involved, so yes, I’ve always had an eye on doing that, for at least part of my time, and it can yield- there have been occasions when it has yielded useful and interesting new stuff.

I know you’re not interested in molluscs, but we had a [WILDLIFE ORGNASITION] meeting two years ago, down at the bird reserve just off the [Road], near [Town]-

INT: [unclear 00:40:39]

P19: -no, [NATURE RESERVE]-

**INT: I’ve heard of it-**

P19: So I quickly managed to, well, I’d been doing butterflies and day flying moths anyhow, but I managed to get round that fairly quickly and do molluscs, and then I thought, oh well, we were going to meet up again at four o’clock, which is what we do after [WILDLIFE ORGNASITION] field meetings, and everybody says what they found, and I went off to look in some woodlands that were nearby, and I found a couple of Vertigo snails. Now Vertigo snails, there’s about 11 species in the UK, and they’re mostly pretty rare, and they’re minute, one to two millimetres, and I turned up at this log and there were two little black dots you see, so I thought, oh Vertigo, Vertigo Pygmy, that’s the common one, you know, that’s the one you normally find when you do find them. So I popped him in a little glass tube to take back to the meeting, to pass round and say, well you know, you think some snails are small, look at these, and one of the questions I often get asked by children is how big are baby snails, to which the answer is, well they’re much, much, much smaller but they have a little tiny shell, you know, well imagine the baby Vertigo is going to be like, a speck of dust.

And I didn’t take those two snails back to the site, I actually just packed up and took them home with me, and when I got them home, I just popped them under a microscope and I realised that rather than having the opening of the shell on the right hand side as most snails do, dextral, they were sinistral, had the opening of the left hand side, and there’s only two species of Vertigo that have the opening on that side, one of them is super duper exceptionally rare, red data book and so on, and the other one is also pretty rare, and I managed to get a close up photograph into the mouth of this minute snail and sent it off for confirmation and yes, it was the less rare of the two, but still very rare, and it turned out that there had been a record, way back in the 19th century, for this snail, somewhere on the Magnesian Limestone in [COUNTY]. The record had never been accepted as genuine, because the chap who had recorded it had recently come back with snails from the Lake District, where this thing is a bit more common, so it had been assumed it was a contaminant from his Lake District trips.

**INT: Oh right [laughs].**

P19: So first of all, that sort led credence to the earlier record, but also, when I went back to look again at this site, there was a massive abundance of this snail all the way along this broken-down old limestone wall that’s on the Magnesian strip for about three quarters of a kilometre.

**INT: Wow.**

P19: And it’s the best population of this snail, certainly in [COUNTY], and nationally, it’s a rare snail. So that was just casual, but I was driven to go there because I knew from- I know where people have been looking at snails in Yorkshire, and I knew that there was nothing for that one km square, so that’s why I went there. I mean, sounds a bit crazy, but there’s not many of us do molluscs and we’re all getting older, and we were trying to map [COUNTY] at the 1km square level [laughs].

**INT: That’s a lot of 1km squares [laughs].**

P19: Yes, about 20 odd thousand [laughs] and yes, and some of us have fallen by the wayside since then so- So I’ve always had an eye on going to new places and have sometimes been prompted by the information that can be provided to us on where to go, yes.

**INT: And are you also sometimes responding to requests from people, to visit particular places as well?**

P19: Yes, if Covid hadn’t struck, again I’m sorry I’m using molluscs as an example but-

**INT: It’s okay.**

P19: [Name], you know [Name], contacted us to say that he thought he’d seen, oh, I’m getting to an age now, where names are sort of out there and then they come to me. It’s the only land snail that has no operculum, it closes its shell. Anyhow, the name doesn’t matter. But he’d thought he’d seen some up at [SITE]. So one of our planned field visits for 2020 last year was to go there and check that out, but Covid intervened, so we haven’t done that yet. So yes, always alert to going to look at new places, particularly as they’re prompted by something interesting.

**INT: And then presumably, you have the same sites that you do like to revisit every year?**

P19: Not so much with the butterflies and moths, because they are- the special sites are being looked after by people with a special responsibility to do so, so no, I don’t really. I mean, I think it probably must be about five years or so since I last went to see the Pearl Bordered Fritillary. I don’t have any desire to keep going back to the same places.

With the molluscs, of course, by virtue of being chair of the [nature society], we have a monitoring responsibility for certain rare species, and so for example, there’s a very rare, another one of these Vertigos that occurs in parts of [SITE], and we do sort of have a plan to visit these, there’s only a small handful of these special ones, at least every five years, but that sort of thing, of course, is fulfilled by other people, as far as [species] concerns, so I don’t have that same feeling that I need to do it.

I generally feel that I’m better off going to new places. Of course, with the moths, there’s my garden, which is an extreme case of revisiting it. I revisited it every day.

**INT: Yes. Do you do night moth recording at any other places or is that just your garden?**

P19: Well we’ve been doing [nature reserve] the last couple of years, and I mean [Name]’s been the driving force behind that, because he used to be chair of the management committee for [nature reserve] and he and [NAME] wrote a book about [nature reserve] 40 years ago, so he has been trying to refresh the species lists which are in the appendix of that book, and then also of course, there was the planning enquiry. There’s the threat to build homes next to [nature reserve] , and [Name] was sort of the driving force between, you know, for the ecological defence, as it were.

So we’ve been doing regular light trapping. I mean [Name] and myself and one other person have been the most regular contributors to that, and on various occasions we’re joined on an ad hoc basis by other people, trying to keep within the Covid limits and so yes, we’ve basically increased the species list at [nature reserve]and there’s a paper coming out in the August Naturalist on that, but we’re continuing to do it. It’s definitely showing that [nature reserve] is a very special site.

I mean moths are very good indicator species, you know, to have a good diversity of moth species, you need a good diversity of plant species, which of course are good habitat indicators and so on. So it’s telling you more about the site than just that it’s good for moths. So we’ve been regularly doing [nature reserve]and there’s a bit of a feeling between one or two of us, that [Name]’s the chap with the generator, so either you have to use battery traps, which they don’t pull the moths in quite as much as a, say a Robinson trap, that we ought to be visiting one or two other places, and I think we will start visiting some of the YWT sites.

**[00:50:03]**

We went to [nature reserve] for example- I just saw a head appear on the door [laughs].

**INT: [laughs] Don’t worry, it’s my husband.**

P19: We went to [nature reserve] last autumn and did- we had about five light traps there and got interesting stuff and I’ve done a bit of stuff for [nature reserve], yes, you know that don’t you?

**INT: Yes.**

P19: Yes, and a bit of light trapping elsewhere but not much, but there’s other people who really do an awful lot. [Name] has a group who do a lot over in his area and there’s [Name] who you probably know. He and colleagues do an awful lot out on the [NATIONAL PARK] and the coastal area, but I haven’t done much of it, no.

**INT: And what would your- so the motivation there, would be to try and get a better understanding of what’s at these particular sites? It’s not necessarily linked to a threat like it is at [nature reserve] ?**

P19: Well I think you- massive proportion of my effort with moths is based on the home site and I mean of course, there is value in a 30 odd year data set like that. With butterflies it’s different. I do record the butterflies that I see in my garden on a casual basis, as a single site, but wherever I go, I’ll be on the outlook for butterflies. So sometimes [Name] might be driving the car and I’ll be in the front seat, and you can easily see an Orange-tip male as you’re driving along country lanes, so I’ll have my GPS there just in case, you know, and jot down what I see.

So- Ah, but of course, I do do transect recording with the butterflies, don’t I? So yes, I’ve been quite involved in transect recording. I mean, you set up for me and helped in the first year of the [nature reserve] transect, and then I set up the [nature reserve] transect, obviously couldn’t be doing both, so I put a thing on Facebook just before the start of the season, two years ago, help, we’ve got this transect between [City] and [Town], anybody interested in walking it, and [Name] immediately appeared, so I haven’t been involved in any of the walking on that transect, and [Name]’s running that one very successfully-

**INT: Oh good.**

P19: And [NATURE RESERVE], it’s a good transect. It’s not producing vast numbers of butterflies, but it’s very species rich. So I did a quick sort of preliminary analysis at the beginning of last year, yes, right at the beginning of last year. I just went through the UKBMS website, which is- have you seen the new version of it? It’s much easier-

**INT: No, I haven’t.**

P19: It’s much, much, much easier, but I just tried, just going on grid references, all the list of transects in the country to pick out Yorkshire ones. I just went for the ones which started off [GRID SQUARE], because the whole of [GRID SQUARE]’s in [YORKSHIRE], and I focused my attention on transects which had got more than a certain number of weekly walks, and then I had a look, in detail, at each of them and then I found that, I think, yes, the [nature reserve] , I think it had more species of butterflies than any of the other transects, that follows [unclear 00:54:12], yes-

**INT: Really?**

P19: -and [nature reserve], there’s quite [unclear 00:42:19] for towards the top for butterflies-

**INT: Yes, I can imagine.**

P19: So they’re both useful transects, I think-

**INT: So what was it-**

P19: -So, yes.

**INT: What was it that prompted you to start doing the transect recording, do you think?**

P19: Well of course I’ve known about transect butterfly recording from way back in the 1980s, back in the days of the butterfly monitoring scheme, because that was one of the things we said to the government, you know, that this could produce national indicators. I mean in those days, it was much fewer sites. They were mainly nature reserves, and they were mainly in the South East of England, which of course was one of the drawbacks of it, but that’s not true anymore of course, now.

What made me want to actually start getting involved in transects? Well I guess what, oh yes, I know, I remember now. When I retired, I was asked to meet up with [Name] from [environment conservation], who was then the heathlands chap in [environment conservation], and [Name], who then had the job in [COUNTY], [REGION], well, [REGION] rather than [COUNTY], that [Name] now has. So they asked me if I could meet them to talk about [nature reserve], and I had actually gone onto, just even before I retired, I had participated in one or two local get togethers organised by [Name] and [Name], to try to get people to go to [nature reserve], and we formed police lines and sort of walked across areas of the common, to try to identity where the Dark Bordered Beauty moth was. Now the Dark Bordered Beauty moth, its only known English location is [NATURE RESERVE], but not very much was known about where it was.

So they supervised a project on the master student on the joint masters programme that there was with the Environment Department in those days. He did some surveying work to find out where the concentration of the population was. Having got that information, they decided they needed a monitoring transect. So I met up with them and they said, “We’re looking for somebody who’s retired and lives near [nature reserve],” and I immediately realised why they wanted to talk to me [laughs]. So myself and [name], who lives in [Town], who was then Chair of [wildlife charity] with [Name] and [Name], they’d set up a monitoring transect for the Dark Bordered Beauty moth, using the technique of the Pollard walk, and I think it was the first time that UK BMS methodology had actually been used for a day flying moth.

So that got me, I suppose rekindled my interest in transect recording, because of course, I’d come across the BMS, the memory of doing the key indicators project, had always been a bit interested in how the data were handled, like, you know, I said to people, when you produce graphs of ups and downs and that sort of thing, you need logarithmic Y axis, and I remember saying that to the civil servants when we were doing that project and they said, “Oh no, we can’t do that because the general public will lose confidence in the results,” and actually, [wildlife charity] are still, they- I see a lot of graphs where things, where the Y axis is not logged.

So I’ve always had this sort of interest [unclear 00:58:25] of course they’re very much- data handled now, it’s far, far better than it was in the early days, and way beyond my statistical abilities to understand exactly how they do it, but you do have this problem that if things double, they go from say 100 to 200, which is a big drop, if they halve, which is the reciprocal, they only go down that much, you see, to 50. So really, something like about, something in the region of two thirds is really the reciprocal of a half, because what you need to say is if you’d gone up to 200, starting at 100, what needs to happen to get us back to where we were, you see.

**INT: Yes.**

P19: So you get a much better perception of reality if you do things on a log scale, than on a [s/l 00:59:10 normal] scale, and so I mumble about that on occasions, when I think it might have some benefit [laughs]. So I’ve always had this sort of interest in transect, and then I thought, oh, what happened was that yes, [Name], about 10 years older than me, he started finding the going a bit tough on [nature reserve], you know, it affects your knees [unclear 00:59:37] that sort of thing, so he dropped out and then I was- my health deteriorated about five years ago when I started this, my problem which I’ve already mentioned to you, so [Name] took over from me as the coordinator for the Dark Bordered Beauty activity and yes and he’s made a good job of it.

**[01:00:08]**

Good move that, and of course I’m also on the [unclear 01:00:12] [nature reserve] Conservation Group as well, so through that, I’m alert to everything to do with [nature reserve], and I was particularly interested in and what was happening there, and other people were also getting interested in because the ponds there are very, very good, and the area was cleared around about 2002, 2003, initially, names again, the bird that flies around at nighttime and eats moths, Nightjars.

**INT: Nightjars.**

P19: Hoping to get Nightjars to come in, and of course what was happening is that it was getting scrubbed up again with the birch, and the birch was sort of, you know, it takes a while to get growing, but then the scrub reaches a stage where it starts taking off, and if you don’t do something then, you’ve got woodland in no time at all. And I knew from talking to people in [environment conservation] that they were interested in the possibility of extending the [nature reserve] SSSI out in that direction, then it gets renotified and it should have happened some time back. Then I was just asked to keep an eye out for anything interesting that you see in. And I was aware there’s a good Gatekeeper population there, a good Marbled White population, and it’s also good for [unclear 01:01:51] lodge and Small Skippers, and Small Heath of course, and Gatekeeper don’t get much further north. It seems that the higher ground, going onto the higher [Hills] is stopping them at the moment. I mean, Gatekeepers swept northwards in the 1990s through [COUNTY], but they got stuck here in this area because of the [Hills].

So you know, putting all that together as far as butterflies is concerned, you’ve got a good group of species there which are of interest, and then of course on the common itself, you’ve got Green Hairstreak. It is probably the best lowland site for Green Hairstreak in [COUNTY], and by and large they’re on the higher ground, more sort of Pennies. So that’s why I thought, oh, well maybe we should have a butterfly transect on [nature reserve] , so that’s where that idea started from, and you were then the transect's coordinator and you sort of got things going. So that’s how that happened.

**INT: And is [Name] still helping you there?**

P19: [Name] of course, [Name] got involved in the [species] work when I wanted to draw back a bit, five years ago, and yes, [Name] and I, we’ve sort of done quite a lot of things together since we got to know one another. A lot of these things, in answer to your questions, it’s sometimes really hard to pinpoint exactly what it is that’s caused something to happen, because one’s mind is a mass of ideas all the time, and the different things come together sometimes and causes-

**INT: Yes, if the opportunity arises and-**

P19: Yes and causes you to take action, you know. Yes.

**INT: So in terms of then what you do with all of the data that you collect, you presumably use it in lots and lots of different ways from your molluscs to your moths, to your butterflies, probably you use them in all different sorts of ways?**

P19: Well the moth information goes through the [COUNTY] moth system using Map Mate, that’s with [Name], and then onto the National Moth Recording Scheme. That’s the major way which it is used. It’s been used for lots of student projects.

**INT: Yes.**

P19: And I mean we do produce the annual [species] report, of course, in [COUNTY], so anything that I find in my garden that’s unusual, or that anybody else in [COUNTY] finds, wherever they are, that’s unusual, it gets reported in the annual report, and I think the criterium for macro-moths is any species with fewer than 30 records will be included in the annual butterfly and moth report, which [Name] now is the editor of.

So, well, there’s all sorts of little things, like I had a meeting, some years ago now, with [Name]. [Name] who used to be the [woodlanD government agency] ecologist for this area on [species] research in [unclear 01:05:41] forests, and nothing very much happened as a result of that, but there was a review of the important [species] and where they are, and one of the top one was the Argent and Sable moth, which occurs in [village] and has since been found in [WOODLAND] up on the western edge of the [AONB], and it suddenly sort of crossed my mind, well I think it was just a conversation with [Name], yes, that’s what it was, he said that Argent and Sable, which is a fairly priority species, has been recorded at [nature reserve] , but seems no longer to be there. So the concern at the back of the mind of, should it be reintroduced, sort of thing. Well of course, you know that’s not an easy question to answer, but then I thought well, it is in [village] and I’ve seen it in [village] and know where about it is, and I think the few people who know where to go and see it, and it’s more people now because the details have been put on Facebook, people go and see it, they go to the place where it is in [village], and maybe we ought to be finding out where it is and where it isn’t in [village], because this could actually inform management of the woodland, and there’s quite a lot of change happening in [village] at the moment.

So I sort of I spoke to [Name] about this and so all being well, I suppose I need to start the ball rolling. They’re planning on having a fairly limited flight period latish May. The area where we know it occurs is, actually, [Name] has a butterfly transect that goes through that area. So he’ll alert us as to when it’s flying, and then the plan is to get a small group of people together and carve up the woodland, and well, I suggested we go out in twos, because it’s a woodland where it’s quite easy to get lost. So one person can be concentrating on the map and the GPS, and the other person concentrating on looking for the moth. Not saying that the first one can’t be looking for the moth as well, but you can get pretty lost in [village]. I think most people have that problem with it and that we will swing into action, all being well, when the conditions are right, hopefully late May, possibly early June, depending upon the lateness of this spring. Yes, I need to sort of start putting the feelers out, to get together a group of people who would like to be involved in that.

So you know, there’s all these sorts of little things. They happened for different reason, really. I suppose really, one’s antennae are alert and you know, yes. Am I answering your questions okay?

**INT: You are, you are. I think in fact, you may have answered all of my questions, which is [laughs]. I have another meeting at half past 11, so had better wrap up-**

P19: Of course. So we’ve been talking for an hour and half.

**INT: We have [laughs].**

P19: Okay, well-

**INT: But that’s been really useful. Is there anything else that you wanted to say about why you record and what motivates you to record, that you feel you haven’t said?**

P19: I can’t really tell you, really, what- it’s just an interest. I mean I could trainspot or something like that instead, you know, so that’s basically what’s going on. I think I, there’s a thing about me, I don’t know to what extent I am different from other people of my generation, but I do not walk around with an app on my phone, just jamming stuff into it, and I get a bit dispirited that the way things are these days, people want an instant identification of something, and they don’t have to work on it, and therefore they’re not learning anything about it.

**INT: Yes.**

P19: Now when I started with moths, all we had to go on was [unclear 00:09:53] books, and it’s very poor plate, and it took you years, actually, to really become proficient.

**[00:10:02]**

And I mean some species of moths are very variable, and to pick up that range of variation. [UNCLEAR], which appeared in the 1980s of course, changed everything, but now people want an instant identification, and if they don’t know what it is, onto Facebook and they want somebody to tell them what it is, and not working at it, you’re not really actually ever going to find out much about those things and I don’t think you’re going to develop good identification skills either.

[wildlife charity] did ask me if they could Zoom me sort of taking moths out of my trap and saying, this is this species for this reason and that reason, and I thought, my God, I don’t know whether I could do that, because I don’t-

**INT: You just know?**

P19: I just know, that’s right, yes. [laughs]

**INT: Yes. It’s that [unclear 00:10:50] isn’t it, and-**

P19: I think there’s a real issue here, that if everybody becomes walking around with their phone, because you can take a photograph, the phone will tell you what it is, tap it, it does the grid reference for you, goes off to some central place. I think you’re going to lose an awful lot of skills, if everybody starts recording in that way. It’s good for harvesting lots of data, I don’t know whether the quality’s up to it or not, but I think there’s dangers, and I am old fashioned, I have a field notebook and everything goes in that.

**INT: Yes. No, that’s a really good point. Yes, it’s something that has crossed my mind as well, I think, is you’re not getting those skills, and actually for me, I know the things that I’ve learnt the best in terms of ID, is when I’ve been with somebody and they’ve been able to talk me through, this is what you need to look for, and this is why it’s not that, and that’s how it sticks for me, but I know everyone’s different, but I think having those mentors and things like that as well, is really valuable and we’re probably getting fewer and fewer of those people as well.**

P19: When I did the butterfly ID for transects the other night on Zoom, I was also dealing with, what do they look like when they fly, what sort of habitat would you expect to see them in, the whole picture of the thing, not just what it looks like in the pretty photograph.

**INT: Yes, exactly.**

P19: Which you don’t have on the transect usually.

**INT: No, and it is like you say, it’s going out. So I did a lot of the fieldwork for my PhD in [village] and I was catching Speckled Wood, and when I started, I didn’t have a clue what a Speckled Wood looked like, but it only took one field season and you could tell in the distance, well that’s the place it’s likely to be, that’s what it’s flying like and I know it’s not a Ringlet, I know it’s a Speckled Wood and yes, it’s just that familiarity isn’t it.**

P19: Yes, when you see them spiralling up in the sun spot, yes.

**INT: Yes.**

P19: Okay, great, I’m glad it’s been useful to you [INT], and do get in touch if you want to pursue anything with me.

**INT: Thank you, and I hope to see you at some point over the summer. I was talking to [Name]-**

P19: Oh yes.

**INT: -last week about , actually, and he was saying about the field trip that the Dragonfly group tend to have there in the summer, to look for dragon flies at , so I hope- I was saying to him, well you know, it’s difficult with children to fit everything in, and he was like, “Well bring them along,” and I think certainly my five year old is now getting to a stage where he would be able to come out on trips like that and that would be nice to do that with him. I don’t know if you tend to go along to those trips, but it would be nice to see you at some point.**

P19: I do them. I often do guided walks on [species]. [NAME]’s been on one or two of my walks, I think. With permission to open the [woodlan government agency] gate, you can actually get to [SITE] off the [ROAD]. You know that, do you?

**INT: Yes, yes.**

P19: And you can get a car well down on towards, that way, thinking of the children.

**INT: Yes, well that’s often the barrier, is you know, my children are like to be on wheels instead of feet. They’re very good cyclists but they’re not that keen on walking [laughs] so-**

P19: You don’t want to get stranded three kilometres away from the [nature reserve] car park with kids that are tired-

**INT: And have to piggy back them back [laughs].**

P19: Yes.

**INT: So yes, getting access down that route would be useful for getting to that bit of the site, but yes, I need to get them out and about a bit more, I think. They’re very enthusiastic about birds at the moment, so I need to capture this enthusiasm.**

P19: Well we’ve got my granddaughter [Name] here. She’s with [Name] in the garden at the moment, because I can see them. We originally- I was trying to avoid Wednesdays to see you because she comes on Wednesdays normally, but it had to be swapped round this week, so she’s actually here today, but she’s into birds as well, birdies. She’s only 19 months old but she’s dead keen on birdies [laughs].

**INT: Yes, excellent. So lovely to talk to you Terry, thank you so much for your time and yes, I hope to see you soon.**

P19: Great. I hope the project goes okay.

**INT: Thank you. Okay, take care, bye.**

P19: Bye.

**Audio ends: [01:15:30]**