Mary CARVER

This is a conversation with Mary Carver on the 6th December 2011 –

AKA 'Molly'.

– at her home in Canberra. Mary – or Molly –

Molly, yes.

– I wonder if we could start our conversation at the time when John had become aware of the advertisement for the Elder Chair of Physics in Adelaide?

Yes. That would have been in about 1960, '61, when Mark Oliphant – no need to tell you who he was – he approached John, who was a research fellow, I think by that time a senior research fellow, in the Department of Nuclear Physics at the university, the Australian National University, and Mark Oliphant was the Director, and John was a senior research fellow in nuclear physics and his boss was Professor Ernest Titterton. And Oliphant approached John and told him that – suggested that he should apply, recommended that he apply for the Elder Chair of Physics in the University of Adelaide.

Now, in later years, it was obvious that there was a special relationship between John and Oliphant. Had that already started?

I think that that was – I'm sure that that was the case. Oliphant had a department and he was head of particle physics whereas John was in nuclear physics. But I think that he'd – I'm not quite sure what the situation was, but he did have a great affinity for John, and for instance he was – and he was always very interested in when our babies were born. But he had a chosen[?] and they did a series of lectures in the Snowy Mountains for some engineers – I've got copies of that – with Oliphant and Titterton and John, so they did know one another. And Rosa was a friend of ours, she was a friend of ours, she was a mother to all her 'girls', with all the wives of the thing. So yes, there was a special relationship, I think.

And Oliphant approached John and recommended that he apply for it, and John was 34 years old at the time and I think it was Oliphant who said that, at the

University of Adelaide, they thought that the department under a new head should make use of the rocketry that was – of the facilities that were available at Woomera and at the atomic energy research establishment at Salisbury – I've forgotten what it was called now.

The Weapons Research Establishment.

WRE, the Weapons Research Establishment at [Salisbury].

Yes, that was close by.

Close by. And so I think that the suggestion came from him. Now, this meant that John would have to move from nuclear physics into upper atmosphere physics, but he didn't have to think very – I'm sure he didn't have to think very – he was very, very interested in going, and he applied and went for the interview, and was told – and he went – we moved to Adelaide in August, I think it was August 21 1961.

I don't know whether you realise, but John's predecessor in the Elder Chair of Physics was Leonard Huxley.

Oh, yes, yes, yes, yes.

And it was Oliphant who had suggested to Huxley that he should apply.

Oh, I see. (laughs)

So two successive appointments were at the suggestion of Oliphant.

Yes. Well, Oliphant, of course, was a great Adelaidean – I mean, he was born and reared there and did his degrees there, and he had this great loyalty and love of Adelaide, as did his wife, and a great love for the Department of Physics in Adelaide. And the people there, like Fuller and Burdon: he writes great things about them.

Yes, he did.

Yes.

Especially about Burdon.

That's right. And so that's how it happened. We left here in August 1961 and he got into the matter and he had to change his discipline from nuclear physics to upper atmosphere physics, and there's lots of correspondence about him trying to get hold of new staff and bringing in the students. And what he did do was he went to lots of conferences. He went to COSPAR, which was the Committee On Space Research. I think he went to 22 meetings of those in all.

How did he get involved with COSPAR, do you remember?

It would have happened after he went to Adelaide that he went to the first meeting in – I think it was in Washington or Florence.

Yes, but he became chairman of that, didn't he?

Not the chairman of COSPAR, no. No.

He was a chairman of a subcommittee of COSPAR.

Oh, no, no, no. The chairmanship for this was – he became chairman of the United Nations Subcommittee on the –

Was it the Peaceful Uses of Space?

– the Technical Subcommittee – the United Nations Technical Subcommittee on the – – –. COSPAR is a conference, you see, a conference they had every year and then they went to every two years, and so he went – – –.

But it must have been through the attendance at those conferences that he – – –.

And in 1970 he was appointed as the United Nations – the chairman of the United Nations Committee on the Peaceful Uses of Outer Space.

That's right.

And that was held in New York and then the last two years that he was there it was in Vienna and then once in Geneva, and he went – he was chairman of that for 26 years and he didn't miss one meeting, and that in itself, you know, that was sort of another career, so every Easter, and then it moved to February, he would go off and chair this committee, and that led to him being chairman of lots of other committees.

So he continued in that role after he came back to Canberra.

Oh yes, and he retired from that in 1995. And I actually went to that one, the last meeting. That was in Vienna, that one. But every Eastertime and then every early February he would go off to this meeting.

Yes. That was a big achievement.

So that was sort of – he had his career in the ANU and then the University of Adelaide, and then concurrently and then back to the ANU as the Director and then concurrently with that in 1970 when he took over from Dr Martyn – I think it was David Martyn, M-A-R-T-Y-N – who died, quite suddenly and tragically, and he was an Australian from the CSIRO. I've forgotten his first name now, because there are other Martyns in the field.

Yes, there were.

I think it was David. And so he took over that, and he was there every year. So at the last meeting he said that he'd decided to resign, because he was quite ill then, at that time.

One of the things that has struck me in reading and talking to people about the early days –

Yes.

– of Huxley coming to Adelaide, it struck me, was a parallel with when John came, in this way.

John came – an Oliphant connection, yes.

Well, not just the Oliphant connection, but when Huxley arrived the previous year there had been an unusually large honours class and it had some outstanding students in it, and he'd made use of the availability of those students to get his new research programs started.

Yes, I see.

And he just – – –.

Well, perhaps it was the other way round, that he started this program and got the research students.

Well, Huxley had in mind what it was he wanted to do, what fields he wanted to research in –

Yes, yes.

– but he just took on these young students and pointed them in the right direction –

Yes.

– and said, 'Go for it. Get on with it.'

Yes. Yes.

Now, my memory of John coming to Adelaide –

Was the same.

– to start up both the rocket program and atmospheric research and the laboratory program to provide support to it, in a way, that he had a number of young students who came along, and John's approach was to say, 'There it is. Go for it,' and I was one of those people, and there were a number of them.

So what year were you in when John came in August 1961?

In '61 I was a third-year student.

A third-year student. That's right, yes.

I did an honours project in '62 with John as my supervisor –

Yes, yes.

– on gamma ray spectra.

Gamma rays, yes.

And then '63 I started a PhD with John and things were getting going then.

Went on from there, yes.

But it just struck me it was just a similar scenario of a new person coming in –

The Oliphant connection and the honours students, yes.

– and a new field of research and just setting the students to go.

Yes. I don't know whether the honours student came after John did or before. I don't know that.

Whether?

Well, you said that there was a big honours year the year before Huxley came so he made use of the honours students.

Yes. I don't know whether that was the case, but it is the case that there were a whole – about five of us, I would say –

Yes.

– who started PhDs when John was getting that work going.

Yes.

But he gave us our head and said, you know, 'This is broadly where you're going. Find something to do there and get on with it.'

Yes.

He'd take a close interest in it, but he allowed us to find our way, in a sense, and it was quite an exciting time.

It was. And I think that space physics – you know, Adelaide University became a centre and – – –.

Yes. And it was timely, wasn't it, the space research.

Yes.

There was a lot of funding around for space research at that time.

That's right.

So do you remember what particular challenges John found in moving into the University of Adelaide and the whole context of the university?

I think that of changing over. I don't think he – I don't recall – he was just excited and hardworking, as I say, you know. (laughs) The challenges were, of course, going into a department and taking over.

Which has its own tradition and culture.

But it was a very, very happy time, very happy for him. But if you read the Hazel de Berg, you get that typescript – and I'll find it for you, if not – for how long will you be in Canberra?

Tomorrow evening I'm going back.

Tomorrow evening. I mean, you could just go to the library and pick it up, go back to the National Library: Hazel de Berg's interview of 1976, and pick it up.

Oh, I see.

Or I can – and it's got a lot about his work in the department. And then so does this – the academy – Bob Crompton's interview, that has a lot too. And that's John in his own words. He can tell you about it. I can tell you about what it's like being a university wife, which I love very, very much – you know, I loved it.

What was good about it?

Well, the department was full of very nice people, so many of them, and they were all very friendly. And David Sutton and Harry Medlin, who was an intellectual, and he was into drama and we used to go to the dramatic society.

Oh yes, the Theatre Guild.

Yes, yes – and very outspoken. And David Sutton and all the rest.

What about Bert Green? Does he loom large?

Oh, Bert. Oh, yes. Well, he lived just down the road from us in Beaumont. We lived at the top of Dashwood Road in Beaumont and Bert and his wife Marlies, they lived just down the road in Glynburn Road. And then just a bit further down Bryan Rofe lived. Now, Bryan Rofe was one of the –

WRE people.

– WRE people, and his wife was the sister of the fellow who lived next door to us, Des Whitford, who also worked for WRE.

That was an important contact.

So Bryan and Bert Green and of course he was very friendly with and very much with Ren Potts and – Ren Potts and – who's the other one, now? Come on – Angas Hurst, who's just died.

Oh, Angas, yes.

Yes. So we had this wonderful social life. And when I say – it wasn't wonderful because it was so busy because I had lots of children and babies and trying to do a job, a part-time job; but it was a wonderful, friendly place.

During the history of the department there have been times when the relationship between Physics and Mathematical Physics and Mathematics, a sort of a triangle –

Yes.

– haven't always been easy relationships.

I never sensed that at all.

But I rather gather that, during John's time –

No, no.

– those things worked quite well.

No.

And it's that life that you're talking about –

It was a very happy time –

– that made it work.

– and with these splendid people, they were. And Marlies is, I would say, my great, greatest friend –

Is that right?

– and I don't know where she is now.

Yes. That's very interesting.

But she could tell you something about the Physics Department and social life. But talking about the social life, you see, we had lots of visitors and we entertained them. The Duke of Edinburgh came in 1974, and the Queen was going to – for the Centenary of the University of Adelaide, and the Queen was going to come, but Britain called an election at the time so she had to stay at home so we had to make do just with – then we had big dinners there and lots of people, and Sir Harry Massey

came, and – so that was good. And we had lots of visitors. And then, of course, when Oliphant became the Governor he made a point, when any big visitors came to the University of Adelaide, they'd go and stay in Government House, and one of them was Paul Dirac. Now, you'd know about Paul Dirac.

Oh, yes, yes, I remember that.

And there's a great story about John and Angas Hurst and Bert Green, they organised a big outing to the Adelaide Hills. Do you remember that?

No, I don't, but I've read about it.

You've read – well, you know about that, so I don't have to talk about it.

I think Peter Szekeres wrote an account of that.

Oh, did he? I'd love to hear about that one. Who wrote – George Szekeres?

Peter Szekeres.

Peter, his son.

George Szekeres's son, who was – – –.

And George Szekeres was another, because he was a great friend of Marlies Green, the Szekereses were, so I got to know them, too. But, briefly, we all of us – wives and children – all went out, and we were taken in cars and dropped at a point, and the men – that's Bert and Angas Hurst and John – they were going to drive to the place where we were going to walk and then be picked up by them at the end of the walk. And so we went for the walk, and I actually spoke to Paul Dirac and he actually spoke to me and he just said, 'What's that?', you see, and I said, 'Oh, they're apple trees,' you see. (laughs) And then he said, 'What are those?' And I said, 'They're pine trees.' And this is what had happened: they'd taken them to the area of bush, you know, that might remind him of Europe, (laughs) not the Australian bush. And then every time he did speak they'd say, 'Oh, how profound.' (laughter) But I did go to his thing and he ended it all by saying – and he put something on the wall, he put a formula on the board at the end and said, 'That explains –' either 'most of

chemistry and all of physics' or the other way round. But it was a very profound lecture.

And then the other thing I remember is we used to have the Einstein Memorial Lecture and I think that was given by part of the department and it was every year. And Fred Hoyle came – you know Fred Hoyle, the great astronomer – he came and John went up to meet him early one morning to pick him up from the aeroplane, and the next thing is I'm lying in bed and there's a knock at the door and it's John with Fred Hoyle, and he said, 'And we can't get him into his hotel.' (laughter) 'We can't get him into his hotel,' so he brought him home. And then young John – he was only a little fellow at that stage – he said to me, 'Why are you putting on your best dress, Mummy?' (laughs) So that was it. But he gave a lecture and he gave it in the Bonython Hall, and at that stage Fred Hoyle was very famous as a novelist because he'd written – I think the thing's called either *The Andromeda strain* or *A for Andromeda*. He'd written a book. And he'd written a couple of other books about it. And so we were there waiting to go on the high stage, and he just looked out and saw that the Bonython Hall was actually packed and people standing all over, standing everywhere. And Fred Hoyle said, 'My god! Nobody's going to understand a word of this,' you see. And he went and he gave the lecture and it was all about Rutherford and Rutherford's great achievements. He gave a talk about – sorry – he gave a talk about Einstein and what Einstein had [done], and he talked about 'the eponymous lecture system'.

And then the next year there was another one called Eggen and he was the new – he gave the talk, and I think he was going to be the new government astronomer at Stromlo, and he was an American and he came, and he'd just got off an aeroplane and he just talked and complained all the time, and that was the most boring – and he was so patronising – talk that ever came. Now, who else came? Who else? What other famous visitors did we have? We had a couple of very famous people.

And then there was this conference that I don't remember and I've got a video of it and I'll give it to you. Or you can ask Harry Medlin about it. He gave it to John

Adrian, my son John Adrian, to give to me when John Henry was head of Physics there, and if you haven't got a copy I'll send it to you because it's – – –.

Was that an ANZAS conference?

No, it wasn't. It was probably not a conference. It was a meeting –

I see.

– in the Department of Physics, and some very important person came and gave a talk, and there's a copy of the talk on this, and it's on a video, not on a DVD. Anyway, if you can't get it from Harry and if it isn't there in the department – – –.

What about the rest of the university? John was a person who strode not just the physics stage but the university.

His contribution to the University of Adelaide .... Very soon afterwards, what they did with new people is that he was the dean, was made Dean of the Faculty of Science, and then he became Chairman of the Education Committee for a long time, and then he was a member of council for a long time, and I've got the information there, and he was re-elected a couple of times with outstanding majorities. And then he even stood on a – he even chaired an investigation into somebody who had been accused of 'moral turpitude'.

.....

No. (laughter) No, he wasn't accused of moral turpitude; he'd taken action against another professor for some reason or other and then who'd accused him of moral turpitude. And it was something to do with ducks on his property and the insecticide that was used in the Department of Agriculture.

I've got a vague memory of that.

And John chaired that one, you see, and in the end he said – he looked at it from a legalistic point of view and it was, of course, that there was no case, that the professor could not be terminated. His appointment could not be terminated.

Difficult decisions, though, aren't they.

Yes. But then there was the excitement of – and then, within a couple of years – and it's all written down in John's memoir about the research and about Woomera and about how he got – very quickly got papers written and got students working.

What about – Doj Jordan is another name that comes to mind.

Oh, that's right.

They were great combatants – – –.

Well, of course, he was the head of Chemistry, and of course they all met on the Education Committee, and he was also very friendly with Horst Lucke. You see, he was friendly with them all. And then there was a chap who was married to a girl called Eleanor, who was a very nice fellow. Very friendly with him. And Doj Jordan, and he was – when the chairman, and of course being the chemist, and he lived in Glen Osmond, which was just also down the road.

Oh, I see.

But that didn't have anything to do with the thing. But I don't know much of the association. And he was also very, very friendly with Badger, who became the vice-chancellor, and he was the head of Chemistry – well, perhaps was two heads of Chemistry: one might have been Physical; one might have been Organic.

Well, Jordan was Physical Chemistry and Badger was Organic.

Organic. Yes, yes. And so they had great – they had great lot to do with one another. Who is that fellow? Might have been Geology or something. That fellow there. (indicates) That's Elford there.

That's Graham Elford.

That fellow. He was married to a beautiful girl called Eleanor.

Ah, Eleanor. Jacka, Fred Jacka.

Jacka, Fred Jacka. Yes, that's right, yes.

Yes. Fred died. Eleanor is still alive.

That's right. And what else do I know? I think, as far as the work is concerned – and you and he wrote a book or started writing –

Oh, yes.

– wrote a book and spent a lot of time writing a book, and he spent a lot of time on that. And I've got the –

The manuscript?

– the manuscript there. Would you like to take it over and finish it? (laughter)

Yes, but it was never – – –.

But what happened there was that he wrote the book and he was at Oxford, he went to Oxford. Now, why was he in Oxford? Oh, because our son Robert was at Oxford. He used to go to Oxford whenever he could. Whenever he was in Europe or England he used to go to Oxford to see his son, Robert, who was doing a PhD. So he took the manuscript along there and what happened was that it seems that there was a misunderstanding, that the editor wanted to – you know about this, anyway – the editor wanted a popular book written and he got a shock when he saw a set of formulae on the second page or first page or something like that. (laughter) So that manuscript is there.

Yes. I must have a copy of it myself.

You must have a copy of it. Oh, well. If you want it, I'll send it to you, so let me know. You can publish it. There was a lot of work went into that.

Yes, it was.

What else?

What about WRESAT? What did you see as John's role in that happening?

It's all here. I've got all these pictures here. But he's written – he did this in 2002 when he was quite sick, so I was his amanuensis, as it were, so I had to – he was even slow with the writing. There. That's it in a nutshell. But there's lots of information about it, and I can send you all the information about that.

Yes. What did you see as his role in the WRESAT happening, the initiative?

Well, he was approached, I think by the – I don't know who approached him, whether the Americans approached him or whether the WRE people approached him. I don't know who started that. But John was very important because the situation was that the Americans were leaving Woomera. The Americans were leaving Woomera and they had a red rocket, a Redstone rocket – is that right? – to spare.

Yes, that would be right, yes.

And they offered it to WRE and/or John and/or the Physics Department. Don't know which. They offered it to them if they could make use of it. And so I don't know who decided that they were going to build a satellite. So mostly Bryan Rofe – which was the head, Bryan Rofe; and is that – oh, goodness. There were a lot – and Peter Twiss[?], I think, was related, associated with it. But it was decided that it had to be done, but it had to be done in 12 months because if it wasn't used – it had to be done within 11 months because that's when the Americans were going to go, and they weren't going to leave it behind, you see.

That's right.

So all the work had to be done in 11 months. And what happened was that WRE assembled the satellite and John and his group and any students and especially Brian Horton – do you remember Brian Horton? –

Yes.

– I can give you his address, if you want it – he and Brian Horton decided what would go into it, and they decided to build – to put the experiment in it, and it was something to do – and it's all there. I've forgotten what it was about. It was measuring something. And so the Physics Department – – –.

Yes. Brian Horton had – they were ozone detectors, I think.

Something like that, yes. And they decided to – they were going to put experimental work into the satellite, and then the satellite was brought to Adelaide. It was brought to Adelaide.

We tested it in the tank, the big vacuum tank.

And tested it in the vacuum tank, yes. I've got photographs of it here. In this here – there, I think. Is that it there?

No, that's the six-metre monochromator.

That's the monochromator. Well, I don't know where the vacuum tank is, but there's a photograph. Anyway, those photographs are in the department, because John Patterson wrote to me not long after John died, looking for photographs and so I sent them to him, and he said that he had already had some of them. There it is in the letter from the vice-chancellor. That's in the Adelaide *News*. Where is it? Oh, this is before it went up. There it is. They're testing it there, but I obviously haven't got pictures of the tank, the vacuum tank, because I thought that perhaps that monochromator was the [vacuum tank].

No. That was another big initiative, too, to build –

There.

– what was the largest scanning ultraviolent monochromator in the world.

Well, there you are. That's another. I didn't know. I thought perhaps that was the tank, you see. That's that photograph there, you see. That's a model of the satellite before it went off.

Yes.

But there's lots of information about WRESAT and I can send it all to you.

No – what I was particularly interested in is just in what sense it was an achievement for John in that happening.

Oh, it was great, because it was all – it was the timing – it had to be done and it had to be done quickly – and the organisation, and he had to – it was an amazing

accomplishment. And people say it was just a little one, but it was the third satellite to go up – third country to produce its own satellite. There it is, there.

Yes, that's the one.

There it is, there.

It's not there any more. I don't know what happened to that tank. It was there for a long time. But that room became a – – –.

And do you know any of these people here, because that's what I would like to know. I knew him by sight.

Yes. Just don't ask me their names at the moment. And him I know; I can't think of his name, either.

And this fellow. I'd love to fill their names in.

But these were both technicians in the university.

Yes. And these two.

That's Bob Hurn.

Bob Hurn.

Now, Bob Hurn has just recently retired.

He was a student or a technician?

A technician, very good one.

A technician. Bob Hurn.

Yes. So what would you say was John's biggest achievement from his time in Adelaide?

In Adelaide? Well, undoubtedly WRESAT. You know, he was the leader of the group and got it all together and worked it all out, and liaised with the WRE people and got them all together, because I think – I've read somewhere that WRE and the Physics Department hadn't liaised much, they hadn't liaised much before that. And as far as – I think building up the Physics Department and making it at that time one of the most successful – I don't know, but building up things –

A very successful department, yes.

– in that field and in other fields.

I was trying to think the other day: when was the Oliphant Building constructed? That must have been – – –.

In the ANU?

No, no, no; in Adelaide.

Oh, I don't know anything about that, no. And it might not have been given that name in John's time. I know they did build a big building – and my son Robert would know something about that; he actually wrote and asked me about it. I think if you want to know about the Oliphant Building it certainly didn't have that name when – in my time, in our time, in my time. And it might be – is it the red brick building that's just to the side?

Yes.

Because that was part of what was John built, and van Rood. Do you know van Rood was the manager?

Yes.

And they had a very good relationship, too.

Yes. He was an interesting character.

He was. He was an ex-Stalag – he had been in the – I think he'd been in the – – –.

Used to work for Dutch Shell or something like that.

Yes, that's right. That's right. And he was a Dutchman, I think. van Rood. And if it's that red building that's at the side of the main building – – –.

Yes, that's the one. But then came the time when you left Adelaide –

That's right.

– and John went back as Director of the Research School of Physical Sciences.

That's right.

That must have been a climax to his career, going into Oliphant's old job. That must have been something special.

Well, he said – he did talk to Trevor Ophel, who was at the ANU, and he did say that that was the best job in – it was the best job in physics in Australia, and he also is quoted as saying by Trevor Ophel that it was the only job he ever wanted, but I don't – I mean, that's cited in almost everything, but don't quote me because I think that the physics job in Adelaide was the best job that he had – you know, gave him the greatest joy and pleasure, and getting that job would have been his greatest joy, I think, getting that job.

And the sense of accomplishment while he was there.

Yes – no, no, no; the actual being *given* the job, or being appointed.

I see, yes. It's interesting: people always say that John was very young when he was appointed to that chair in Adelaide.

Well, he was. He was only 34, but he was 35 within a month, but I also heard that it was the policy in the university – that Rowe, you know the Rowe?

A.P. Rowe, yes.

A.P. Rowe – that he had the policy of appointing bright young people to chairs.

But John – – –.

And, of course, what – Bob Crompton quotes Bragg, who was 25, but that was in another era, but Ren Potts – – –.

And Lamb was 23.

Yes, something like that. Yes. No, it was Lamb who was 23. Bragg might have been, I don't know –

26, or – – –.

– 26.

Both of them were younger than – – –.

That was another era, you know. Bragg wasn't even a physicist, was he, so Tomlin says.

Well, they were both mathematicians.

Both mathematicians, that's right, and so he had to learn up physics in order to start teaching it in the university and had a few students. But Ren Potts was very young when he was appointed, and Ren Potts was already there. He was already there when John went to Adelaide.

Yes. Ren Potts came back in the early '50s or '52 or something like that, I think.

I don't know. I only know when I was reading about his death that he was only in his early 30s as well.

Yes. And I think Ren – – –.

And Bert Green would have been – I don't know, but he came – – –.

See, Bert Green came in about '51 or something like that, and Harry Messel was appointed to a position alongside him.

That's right. He came and didn't stay.

Now, I think Ren Potts applied for that position, because Ren Potts at the time – Ren Potts was a physics graduate and he was working in mathematical physics then, and I think he tried for that position with Bert Green –

With Bert Green.

– which Messel went into, and he didn't stay very long.

He applied for Bert Green's job or for Harry Messel's?

No, no; for Harry Messel's job.

The one Harry Messel got, yes. And he didn't stay.

And then he went back into the Mathematics Department quite soon after that.

Yes, yes.

Yes. And then became part of the relationships between those departments later on.

That's right. It was a very happy relationship.

But it seemed to me that coming back to Canberra in the research school job sort of closed a loop with Oliphant.

Oh, that's right, that's right. And he was here and then he took his wife to Adelaide because she wasn't – you know, she suffered from dementia. And so he chartered a plane and just went, went to Adelaide, because he reckoned she wasn't being looked after in the nursing home here. But you should read the memoir, Oliphant's memoir, about his time in Adelaide. I don't know whether you want to go further back than that, when he was an undergraduate there, and Rutherford came to give a lecture.

He made a visit – that's right.

Yes, you know all about that. But I think – – –.

And then Oliphant attributes a paper he'd written with Roy Burdon – on the mercury surface tension, I think –

That's right.

– for getting the scholarship that took him to the Cavendish.

To the Cavendish, yes.

What about your career? Did you ever resume that?

Oh, yes, yes, yes. When I met John in University House I'd come to work at CSIRO as a young researcher, and I can send you a – I've got a copy of that. I did write something, because Jill Waterhouse, a local historian, she's written a history of University House and she wanted contributions, and so I wrote something about me, about me. I didn't write much about John. And he was there, and I was working at CSIRO, but University House had not opened – had only recently been opened and it wasn't full, and so they invited selected members of CSIRO and some other organisations in Canberra to come and live there, and so I went there and John had moved in – when he first came back, when he first came to Canberra from Cambridge, he was living in Brassey[?] House, and then University House opened and he came and stayed, so he was a foundation member of University House. And I

noticed him up on high table, and then he came and he knocked at my door one night and he wanted me to – we had play readings every Sunday night and he'd been convened to organise this particular night, and he knocked at my door and wanted me – that's how we met: he wanted me to come and be, I think, his unfaithful wife in one of Shaw's little plays or something. (laughter) And so that's how it started. And then we got married while we lived in University House. And in the meantime John had become the bursar, and so we had our reception – we got married at St Christopher's and we had our reception at – – –. John was an Anglican, by the way. He said, 'I'll marry you wherever you like, as long as you marry me.' (laughs) And we had our reception at University House and all of our friends from University House were there at the wedding. It was a great time.

And Oliphant was there, and what he did was he changed the leads – he undid the batteries in the car. He undid the batteries from the car when we were going away, and he put them back when it was discovered we couldn't drive off, you see, when it was discovered. He put them back and he put them back the wrong way and so the car still wouldn't start, you see. So that was a big problem.

And we drove off. And John had said, 'Don't worry. I'll look after the honeymoon,' and we got off, and I said, 'Where are we going? Where are we going?' And I thought he was going to take me to the Blue Mountains, you see. (laughs) He hadn't done anything! He hadn't done anything, and there we were on the way to Queanbeyan. He said, 'Oh, we're on the way to the coast. Let's go.' So we stopped at an old hotel that was on the road to Queanbeyan – I don't know whether it's still there – and we stayed there for the first night. (laughs) He had organised nothing. He hadn't even organised where we were going to go. So that was – anyway, that's not very relevant.

No, but I was just wondering about your career as an entomologist.

Oh, that's right, that's right. So I worked at CSIRO. And then, at that stage, I was a young researcher and we had to – I earned less than the male, but that was okay because the male did all – you know, was the – the male used to – he had to look after the family, he was the breadwinner, and if you socialised he did all the paying,

you know, and got you back to your place at night. I became temporary as soon as I got married. And then – in 1955 – the end of 1956, we left University House. We had a corner flat. I don't know, we must have been mad to leave. We had a corner flat because he was the bursar and looked after all the accounts, and we left in 1956 and we and the bank bought a little old house in the bottom of Coranderrk Street opposite where Glebe Park is now, but it wasn't Glebe Park then because the elms used to come up through the floorboards, you know. (laughter) The elm suckers used to come up through the floorboards.

And then I became pregnant and of course soon as – and then my son John was born, and then I had to leave. And I left the day before the baby was born. So that was a big shock to me, and I'd submitted one paper, but it was a very important paper. It was probably the best one I'd written and the most important one I ever wrote. And so I had to resign. And then I missed the work. The conflict was enormous between family and work, and it's remained so ever since, I can tell you, because I had to leave. And then my successor was appointed and he came back and so he needed me, so he managed to get – there was a lot of money available at CSIRO then, and so I went back to work, just for three hours initially, because I had two babies at the time. I had one baby, and then we went overseas to Harwell – you know, to Harwell on study leave – and that was very – John did a lot of work there. He published five papers in one year. And so our second baby was – we had one baby, and then our second baby was born in Wantage, which is near to Harwell, and on Christmas Day, of all times, and then when we came back my successor had arrived and somebody else and so they needed me. So I was able to go back there and work part-time, and as it went on I used to just feed the baby. I got somebody in, I got a 'mother's help', and I'd feed the baby and go off to work for three and a half hours and come back, feed the baby again, and that went on, because I ended up having five babies and I continued doing that until the youngest went off, went to school at the age of five, and that was in Adelaide because our fourth and fifth babies were born in Adelaide. Three were born here.

And so I was able to get back, and then when I got back we went in 1961 to Adelaide and in 1962 I went to work at the Waite Institute. And then I gradually increased my hours there and then we went overseas in 1968 and I got a Churchill Fellowship. So John was going on study leave to the NRL[1] in Washington and I got a Churchill Fellowship and I had four children, so while they were at school I used to go into the Department of Agriculture and work there and come back. And then, coming back – then we went back to Adelaide – I went back to work, but there was no money, and so eventually I got – working part-time. But all through those years, you see, there was no such things as permanent part-time work, and the part-time work – for instance, at the Waite Institute, I was there as a research assistant. I just got a little stipend from CSIRO, they sent me a little stipend every year, and I had to apply for it every year. And all it did, really, was to – it meant that John could not apply for me as a dependent, you know, for income tax purposes, so financially it was – – –.

And then in 1980 the pea aphid arrived in Australia and my services were needed then, and so I went back. Doug Waterhouse managed to get me some – so I went back, I went part-time. And then I was appointed, I was appointed as a principal research scientist. This was 1983. And so that was full-time and full pay for the first time. And then I actually managed – then times got bad and they started downsizing. That's when I first heard the word 'downsizing'. And I was – (laughs) that was 1989; I was downsized. But I managed to make the arrangement that I'd work for three years on half pay, and so that's what I did until 1992. And then I just worked as a visiting fellow – oh, no, we were honorary – we have honorary fellows at CSIRO – as an honorary fellow until about 1992 – no, until just before John died. Because John became sick and I couldn't get back to work. I just couldn't get there. It was just not possible. I was 24/7 looking after John. So I sort of ended in a whimper. (laughter) And all my papers are here, and, as you can see, John's papers are here, and I've sorted them all out once but they've all been dispersed again

[1] NRL – Naval Research Laboratory.

looking for information for – – –. And Bob Crompton has a lot of the papers. And I've got my papers here.

You mentioned that John took study leave at NRL in Washington.

Yes.

What year was that?

That was 1968 to '69. And he went and I've actually got his – I've actually got his green card, look. And he went to NRL.

Do you remember any of the people he worked with there?

Well, he worked with Talbot Chubb, and that's another person. Talbot Chubb came to Adelaide on his study leave. NRL is the Naval Research Laboratory in Washington, and Friedman was there – you know Friedman? Hal Friedman. And Talbot Chubb and Shivanandan, who still comes to Australia. Talbot Chubb was our main – and he was our great friend. What happened was that he came to study leave with his four children – quite grown-up children – and he wanted to come because of John's – because the space research was being done in the university, and that's what drew him here. He's now still around and he's trying to work on cold fusion. He works privately trying to see if cold fusion is valid, is a going concern. And he came with his wife and four children, so we looked after him and became very, very friendly with him. And I don't know what work he did – anyway, you'll be able to find that out. And that would be maybe 1965, when young John was in grade 5 – forgotten – or grade 7. Forgotten. I can find out for you, the year Talbot Chubb [came].

That was an important time because what brought Talbot Chubb here was the space physics was being done in the University of Adelaide and he chose to do that. And, of course, that probably was what came to John going to NRL in 1968, and he went there and – I can tell you from the – I can't remember, I don't have any – because he didn't write to me, you see. So I don't know what he was doing at NRL. But he went off there every day, and of course Talbot Chubb used to drive him and me through Washington, and he dropped me at the Department of Agriculture and

then they would go off to work. I've forgotten where NRL was. It was on the outskirts, you know, quite a long way out. I don't know what he was doing and I don't know – you'd be able to look from his publications list what he did there. I know he went out to the desert, one of the deserts, and saw some rockets going off, I do know that. And I can't tell you – anyway, that was August 1969(sic)[1968?] when we went, and we came back August 1969. But then he was not at the University of Adelaide; he was at the ANU – no, yes, he was.

Yes, he was. In '69 he was in Adelaide.

Yes – no, he was. No, sorry. It was when he went to Harwell, and I think he was here at the ANU, went to Harwell and that was 1958.

So that was '69 he went – – –.

1968 – August 1968 he went to NRL for a year.

Yes. Ah. That's why I don't remember it, because I was away then.

Ah, I see.

I'd finished my PhD and I – – –.

I think he went to see you then because we went to England.

At Imperial College in London, yes.

That's right, because we went to England first, because of course I hadn't been back home and so I went home and – oh, no, I went in 1958. That's why – – –. But 1968 we went to England first to see my family and to introduce my children to – – –.

Yes. Another person who visited Imperial College while I was there was Ernest Titterton.

Ah, yes.

Did he have an impact on John?

Oh, yes, of course. Yes, of course. This is Robert, my son, writing to his father asking him questions. I believe that Ernest was a difficult man, and he was, he was, but he had marvellous – he had marvellous qualities as well. You know, I always

look for the good in people, and he was a marvellous fellow. And he looked after John and was a great supporter of him. But you know when we went 1968 to '69 John was – '58, '59, when we had our baby over there and we had a little – we had little John and then we had little Jane born there – and John was .....[?] and he was there all the time and he had a marvellous time. He came home, writing papers galore. You'll see them in the list of publications. He got five papers out of that. And he was in the middle and he wrote to Ernest and said, 'Doing so well, can I stay on for an extra time?' And Ernest wrote back and said, 'Come back willingly and come back quickly,' or something. (laughs) So he went back and got back right on the dot of a year. But I think Ernest – we came back by sea, of course; we went by sea and came back by sea – and Ernest was building his own house, a new house in Canberra, and we had to bring back lots of material – tiles for the house and things like that, and carpentry. And I think Ernest wanted that, you see. But don't put that in your book. (laughter)

But no, Ernest – he had the hard life, because he had three children and the firstborn was – and she works in the university, in the library, she was working; I saw her there last year – but she was born very badly affected. I think she must have had brain damage or something, but she couldn't walk and she walks – she's very badly physically harmed, and people used to say that it was because – – –. Because both of them, both he and his wife, Peggy, were at Los Alamos, you see, when the bombs went off, both, because Peggy was his technical assistant. And then they had another girl and she was okay – I've forgotten her name now; it was a boy's name – and then they had Andrew, and Andrew had mental problems, and still has, I think. I don't know where Andrew is now. So they had this terrible, terrible problem. And Ernest took her to England to try and see what they could do and tried everything to see if Jennifer could get better. So his life was very much affected.

But he was well-known for his meanness, and he *was* mean. He was very mean. But he was very good to [John] and helped John, and John says – this is when John was very sick, you know – (refers to letter) I haven't got it here, but I've got it. I'll send these bits to you. He said, 'How did you get on with Ernest?' And John said,

'We got on very well. I liked him very much.' And he was here often. He came and stayed with us in Adelaide. When he visited Adelaide, he'd come and stay with us in Dashwood Road. And I remember him at breakfast, and he was very fastidious and very neat, and I remember him at breakfast: he was looking up at our – we had a wooden wall, you see, and he said – – –. And some of them were – you know, instead of having straight, vertical slats, some of them were pieced, you see. He said, 'You should take those down. Take those down and replace them with one-piece slats.'

Yes. One thing, one of John's qualities, was the ability to get along with people and get the best out of them.

That's right. That's right, that's right.

I wondered – I was saying to Bob Crompton yesterday, remembering the days when we had a departmental committee in the Physics Department –

Yes.

– before the university ever took that on as a way of departmental governance –

So that was something new.

– yes, it was new – and I always remember that we would have discussions there, and the idea was that the departmental committee would make decisions about –

Yes.

– the running of the department, and that John would let the discussion go and somebody would say this and somebody would say that, and it always seemed to me that John would wait until he heard somebody to say the thing that he wanted and then he would draw the –

Draw that out.

– discussion to a conclusion, and, 'Well, we've decided that,' so that John had got the decision that he wanted and everybody else believed that they had made the decision.

(laughter) Oh, he was very good at that.

It was a very special skill he had.

He would delegate. He would delegate, and then he would say, 'You've done a good job.' And the point was that he hadn't – you know, he would – – –.

It was a matter of sort of encouraging others to feel they'd participated.

That they'd done the job. That's exactly what he [would do]. And he used to do it here at home. He did the job or you'd be working together and he'd say, 'You've done a good job, Molly,' or, 'You've done a good job, John.' And this is in the departmental committee; I'll show you this one. And he was also chairman – he was also the chief examiner in Physics, you see, and he got into trouble there – you know, for the schools, and there was a business there where Basil Briggs, I think, had set the examination papers and then, when the examination [was held] there was a great uproar because they said that the questions were too hard. And so John had said, 'Look – – –.' Because what they used to do then was, you know, they'd just get – they'd get the marks and then they'd just drop off the top percentile or percentage.

They were all massaged.

No, no, it wasn't. That was the way they did it. It was the top percentage that would get passed. And they used to do it with the examination results in the Physics Department too, you see, that they'd have a percentage getting the pass and then they'd have the meetings at the end of the year – this was when we were all – for Christmas, Christmas Eve they'd be doing it, and they'd have this meeting where the borderline cases [were considered] and John would be trying to get somebody over the line. Even with the first-year medical students there used to be something there.

And the honours students was the other one, you know, trying to get somebody a first-class honours.

Over the line. That's right. And he used to have to fight about that one. There you are. Look at this. This was when the chairman – this is the university itself, this is the registrar. Remember Victor Edgeloe.

Yes.

And what this was was the chairman at the Education Committee, but that was really the professorial board.

Yes.

I don't know whether they call it that now, it was where all the professors used to go. And what had happened with the committee meeting was that they were talking about parking, you see, and it went on and on and on and on –

Oh, the parking. Yes.

– and on and on and on, you see. And so John recommended that – (laughs) this is what John recommended. (laughter) He recommended that the Education Committee take over – they appoint a delegate to look after the rest of the university affairs.

Yes. Parking was always the most controversial matter in the university, I think.

That's right: 'That the Education Committee deal with parking, and that the Council appoint a delegate for academic affairs.' But I'll tell you what John always used to say to me, and that is that the person who most ..... was Henry Basten, and that when he first got to the university Henry Basten was the one who taught him about strategy – not taught him, but they worked together, because he was head of a department, and Henry Basten, who was not a scientist – I think he'd worked for Hong Kong – – –.

I don't remember his background.

Oh, he was the vice-chancellor. He was marvellous. But he lived over there in number 13.

Oh, did he?

Yes. (laughter) Number 15, I think.

You always seem to have the key people living nearby.

He was the only one, the only one. John Gascoigne lived down there, but I never met him. I met his son once, his young son. John Gascoigne lived down there

somewhere. But no, Basten was the only university connection who lived around here, and he was here when we got here in March 1979. But Basten was – I've got the wrong word about 'strategy' – about politics and about board meetings and meetings and how to do it. And that's the one thing: John was never – he didn't confide in me much – not confide in me or talk to me very much, because he once said to me, 'I daren't,' because he didn't know what was classified and what was not. And I wear my heart on my sleeve, and I remember after the Canberra Hospital imploded and there was a death and it was horrible and everybody was talking about it, and he did say to me why didn't it implode, and there was some mention of its being that there was a lot of concrete, that there was fortified concrete in the building; that's why it didn't implode, because it was too strongly-built. It was reinforced. And then John said to me, 'This is what's happened, because a lot of the Canberra government buildings, they were reinforced strongly, because this is to guard against possible attack, you know, an enemy attack.' And so I was on the telephone once and so I said – and I was talking to somebody, one of my girlfriends, and I said, 'John thinks that – – –.' (laughter) And so that was when he said to me, 'You shouldn't do that.' So I think that even before that and afterwards he's careful what he says even to me, you see, because he kept a lot to himself. I think that with him it was he – what's – there's a punchline – wait a minute – he 'talked little so that he could hear a lot'. No, that's not the right thing. But no; the less he talked, the more he heard.

More he heard, yes.

That's right. And that was what he did.

Yes.

Anyway, I've told you about Basten. Basten was very important. That's it.

Well, perhaps that's a good place to stop.

Okay.

You've got some marvellous memories of a great career there, and thank you for taking the time to talk about them.

No, I'm very happy I could talk to you, I can talk about John. You know, he's here, you know, he's everywhere. I miss him very much.

END OF INTERVIEW