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A passion for plants: The botanical contribution of collector P.J. Murphy

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Abstract

'Collector: Murphy, P.J.' listed on the online Australasian Virtual Herbarium, collected plant specimens from the early 1980s to 2006. Fifteen specimens were sent to the National Herbarium of Victoria during her lifetime, and the remaining collection of 1123 specimens was donated to the Herbarium in 2007. Who was P.J. Murphy, why did she collect, and what can be discovered by examining her collection of specimens? Much of the information in this article is derived from the minutes of the Field Naturalists' Club of Ballarat (FNCB) and from interviews with her husband, Bill Murphy, and members of FNCB.

Keywords: plant collecting, Ballarat, field naturalists, gender history

Introduction

The contribution of women to Australian botany has not yet been fully explored. Pat Murphy's contribution was significant both in her local area and through the 1138 specimens she collected that are now held at the National Herbarium, Royal Botanic Gardens Victoria (MEL). Pat's story extends the history of collectors and collecting beyond the colonial era into the twentieth and twenty-first centuries, a period as yet only lightly touched on in the history of botany. One advantage of examining a more recent collector is the availability of people who knew Pat and whose memories of her can be accessed through oral history interviews. The Field Naturalists' Club of Ballarat (FNCB) provided the context for Pat's learning about botany and her involvement in collecting (Fig. 1a,b). I was able to



Figure 1 a. Pat Murphy c1999; **b.** Pat Murphy on a Field Naturalists' Club of Ballarat excursion 1995

interview members of the FNCB as well as Pat's husband Bill Murphy. This gave the research a very personal aspect as well as extending it to an understanding of the role of the field naturalists' club in encouraging and supporting field work and specimen collection. I was also invited to participate in FNCB excursions to locations where Pat collected many of her specimens. The opportunity to walk in the bush and re-find some of the specimens Pat discovered was a uniquely moving experience.

Pat came to the study of botany through the Field Naturalists' Club of Ballarat, where she met Stella Bedgood who had studied the local flora for many years. Field naturalists learn through a combination of field work and reading, and through discussing and sharing knowledge with each other, as well as through communication with professional botanists. Their knowledge is passed on through mentoring. As Helen Cohn wrote of the FNCV in the nineteenth century: 'If you wanted to connect with a community of botanists in Victoria ... It was the Field Naturalists' Club of Victoria that provided this sense of community' (Cohn 2005: 284). This was still true of the Field Naturalists' Club of Ballarat in the twentieth century, where the sense of being part of a community of people interested in understanding the local flora and fauna was a major part of learning. Well-known archaeological artist Peter Trusler has written of his time as a teenage member of the Field Naturalists' Club of Ballarat as 'a learning experience with unbridled information that came not via curriculum, but via personality. Knowledge came passionately, imparted by unusual people from all walks of life' (Trusler, Vickers-Rich & Rich 2010: 9).

Field naturalists' clubs have been an important source of botanical discovery and specimen collection in Australia since the late nineteenth century. This has resulted in long-term links with herbaria and museums. Gary Presland discusses these links in his history of the Field Naturalists' Club of Victoria, which was established by a group of staff from the Royal Botanic Gardens Victoria and for many years met at the Gardens. His observation that 'Since its beginnings, the Club has significantly augmented the collections of the herbarium, through the field collecting activities of its members' (Presland 2016: 54) can be applied to other field naturalists' clubs throughout Victoria, including Ballarat.

Ferdinand von Mueller was an active member of the Field Naturalists' Club of Victoria and had a wide network of collectors, both men and women, throughout Australia. Sara Maroske writes that the collectors 'helped him to accumulate a significant Australian herbarium in Melbourne' and assisted him in his extensive contribution to George Bentham's *Flora Australiensis* published between 1863 and 1878 (Maroske 2014: 72). He actively encouraged the formation of field naturalists' clubs. When Thomas Hart was appointed as science lecturer at the Ballarat School of Mines in 1896, soon after the first Ballarat Field Club and Science Society established at the School in 1882 had ceased to exist, Ferdinand von Mueller wrote to him encouraging him to start a field naturalists' club: 'Let me advise you, to start at once a Field-Naturalists Club in your important and prosperous town ... You will then have locally at once a number of Amateur-Collectors, both Ladies and Gentlemen, and an immense impetus will be given to local research ... every town throughout Australia ought to have some such Association...' (Home et al: 2006: 746-8). While Thomas Hart did not act on the suggestion, the Field Club and Science Society was re-formed in Ballarat in 1915, holding successful annual wildflower shows until it folded in 1918 due to 'the occupation of most members in War Work' (FNCB Minutes 9 April 1918). It was revived again in 1952 as the Field Naturalists' Club of Ballarat and continues as an active organisation in 2018.¹

In the twentieth century, the role of connecting MEL with field naturalists was taken up by Jim Willis who actively corresponded with people throughout Victoria during his 34 years at MEL. Helen Aston describes him as 'an unassuming man of gentle and compassionate disposition' who 'gave his time and knowledge and encouragement unstintingly to those who sought his help, extending courtesy and friendship to professional and amateur ... He would identify piles of specimens for enquirers but no one was ever made to feel that they were intruding on his time.' (Aston 1996: 2 & 3) This was undoubtedly true, and Jim appreciated that field naturalists sent him specimens of plants that were unusual, perhaps previously undescribed, or extending

¹ I have taken my cue from the Club's 25th anniversary history of the present club, published in 1977, which sees its origins in the 1882 field club (FNCB 1977:13-24).

the range, or hybrids, or rare in the location where they were found. While they sought confirmation from Jim, their aim was to add to the body of knowledge held at the Herbarium, as in most cases they had already identified the plant. The connection of field naturalists with the Herbarium created an extensive network of field workers beyond the small number of paid botanists. David Elliston Allen describes the qualities of a first-class naturalist as ‘that instinctive love of order, system and detailed record; patience; unremitting care...’ (Allen 1976: 155). It is these qualities that make field naturalists ideal botanical researchers and collectors. Several members of the Field Naturalists’ Club of Ballarat contributed specimens, artworks and photos to the Herbarium in the twentieth century via Jim Willis – not a large number of specimens, but sent because they were significant ‘finds’ (see Appendix 1 and 2). In the 21st century, MEL continues to maintain an informal network of collectors, who may be employees of the State government department (currently DELWP) or members of field naturalists’ clubs or individuals.² Neville Walsh, who has been a MEL botanist since 1983, writes that the specimens they send in ‘are often really interesting records for us’ and that sometimes the enquiry is initiated by MEL botanists who ask collectors to look for particular species (Walsh 2017).

Women played a role in field naturalists’ clubs almost from the beginning. The FNCV admitted Henrietta Dobson, wife of the Hon F.S. Dobson, in 1881 (Houghton 2005: 290) and the Ballarat Field and Science Society records Miss Wooster, daughter of Mr W.H. Wooster, as a member in the 1880s. In London, the Zoological and Botanical Societies had admitted women on the same terms as men from their founding, unlike the Royal Society and Geological Society (Allen 1976: 152). Sheila Houghton, writing of the women who joined the FNCV, writes of three categories of women: ‘those for whom natural history was a passion, whose work in their chosen field led them to become well-known beyond a Club which provided them with interaction with other naturalists’; those ‘for whom the Club provided a focus for their interests’; and the vast majority ‘for whom natural history was a hobby’ (Houghton 2005: 304). Pat

Murphy and her mentor Stella Bedggood belong firmly in the first category – those for whom natural history was a passion.

Life in the 1950s and 1960s had become easier for women, but was still very different from life in the twenty-first century. When Helen Aston qualified as a botanist and began working at MEL in 1957 female botanists were not allowed to go out on botanical field excursions with male botanists. A few years later Helen applied for a job at the Fisheries and Wildlife Department but was told that although she had all the qualifications and experience they wanted, ‘I can’t send you out in the field with men’ (Aston 2017). But field naturalists’ clubs had always included women on field excursions and camps – single, widowed and divorced women, married women whose husbands were not naturalists, as well as the wives of naturalists. FNCB member Margaret Rotheram recalls that she was fortunate to go with Ballarat field naturalists to remote places such as the Dog Fence where she could not have gone alone (Rotheram 2016).

In *Botanical Companions*, Frieda Knobloch examines the relationship of professional botanists Ruth and Aven Nelson in Wyoming. She writes ‘... field work brought work and play together, companionship, knowledge of the living world, through and beyond botany’ (Knobloch 2005: 96-8). She suggests that field work has dimensions beyond the science of botany, especially when shared with a companion. In the case of Pat Murphy, the idea of botanical companionship can be explored in relation to her friend and mentor, Stella Bedggood, and her husband Bill Murphy.

Sara Maroske suggests that ‘a botanical history that recovers the contributions of girls and women ... will require considering aspects of their lived experience previously excluded as irrelevant because they were deemed ornamental or domestic’ (Maroske 2014: 89). Caroline Jordan examines the changing evaluation of colonial women artists who were once dismissed as ‘amateurs’ (Jordan 2005: 4). Pat Murphy is not a long-forgotten or ignored colonial collector, but it is important to recognise her roles as wife and mother and the way those intersected with her interest in botany. Pat’s study of plants developed into an extensive knowledge and resulted in a collection of beautifully presented specimens. Over nearly 40 years, she came to

² It would be interesting to find out how many collectors in the Herbarium’s history have been members of field naturalists’ clubs.

know the bushland of her local area, developing what Meredith Fletcher refers to in her biography of Jean Galbraith as 'environmental memory' based on years of botanical observations (Fletcher 2014: 184). Pat's contribution to botany can be understood both in terms of her extensive botanical collection and in terms of the lived experience that enabled its creation.

A botanical and domestic life

Patricia Joan Murphy, née Perkins, was born on 13 May 1930. Her father was a primary school headmaster, Arthur Frederick Perkins, who was educated at Melbourne High School and then Melbourne University and had an interest in natural history though he was not a member of a naturalists' group. Bill Murphy recalls that if a 'tarantula' came into the house, Pat's father would lean against the wall so it would climb onto his shoulder and on his arm, then he would take it outside (Murphy, Feb 2017). Pat was the eldest of five children, and the family lived in the schoolhouse at Devon Meadows on the Mornington Peninsula. What is now the RBGV Australian Garden at Cranbourne was then part of the bushland near their home (Murphy, May 2016). Pat's mother, Mildred, was born in Dorset, England and came to Australia with her parents when she was a child (Murphy, April 2017).

Pat belonged to a generation born between the wars, when many intelligent women were unable to access higher levels of education and the majority of married women with children didn't work outside the home. Pat attended Dandenong High School, then obtained her Leaving Certificate by correspondence. Her brother Ernest studied science at Melbourne University gaining his BSc and Diploma of Education, but at that time tertiary education was not seen as a priority for girls. Instead, Pat became a student teacher and was offered a position in Gippsland. However, it was at that point that she met Bill Murphy while playing tennis and they were married on 11 November 1950 at Cranbourne Anglican Church. When Pat's father became headmaster of a school in Ballarat not long afterwards, Bill and Pat decided to move there as well. Their five children were born in Ballarat (Fig. 2).

Pat was always interested in nature, but she began recording plant observations and collecting specimens after she and her husband Bill joined the Field Naturalists'



Figure 2. Pat Murphy and family **a.** c1959; **b.** c1966

Club of Ballarat in 1968. Pat had met Stella Bedggood (Secretary of the FNCB from 1958 to 1970 and Treasurer from 1971 to 1974) who invited her to come to a field naturalists' club meeting in Ballarat. The guest speaker was Jim Willis, Assistant Government Botanist at MEL. Pat and Bill went to the meeting and were enthralled. Bill recalls that Jim Willis was 'an excellent speaker' and 'such a friendly person' (Murphy, Nov. 2015). Pat and Bill joined the Club and Pat later became Secretary of the FNCB for two years in the 1990s and a committee member until 2001. Bill was President for three years in the 1970s and Vice-President in 1985.

Stella saw that Pat was really interested in plants and, in the way of field naturalists through the generations, became her mentor. Pat was 38 and Stella 52. Stella had been studying the local flora and fauna since she joined the FNCB in the early 1950s. Like Pat's mother, Stella was born in England but came to Australia with her parents and grew up in Ballarat. Her husband, Edwin Bedggood ("Ted"), was a woodcutter and wood merchant from a



Figure 3. Edwin, Stella and Ted Bedggood

family of local wood merchants, at a time when many homes in Ballarat used firewood for heat and cooking, and businesses such as Ballarat Brewery burned wood to create steam. Stella often accompanied Ted to Enfield Forest, exploring while he worked (Pym 2016; FNCB 1997). Her love of the local bushland led her to become an active conservationist, and with the support of her husband she negotiated with local forest officers, politicians and others as FNCB Secretary to have specific areas set aside as reserves for flora and fauna (Fig. 3).

Stella's botanical knowledge was highly regarded well beyond Ballarat. She corresponded with Jim Willis, often enclosing specimens of plants she had found that were not on his existing lists. He replied from his home in Brighton as well as from the Herbarium. In 1965 Jim wrote to Stella:

*Thanks for drawing my attention to the occurrence of *Thelymitra antennifera* & *T. ixioides* at the Mount [Beckworth]. I knew nothing of these occurrences, but have now added the names of both species to my own census for the Mount ... Despite an indifferent season the Victorian Field Nats from Melbourne seem to have had a marvellous time at the excursion on Oct. 17th, thanks to your excellent guidance.*

By 1976, the formality of 'Dear Mrs Bedggood' had changed to 'Dear Stella', and the sign off from 'Yours sincerely' to 'Aye, Jim Willis', and the tone was less formal:

*The enclosures you sent are all quite exciting. *Leucopogon glacialis* is a splendid find for Enfield, and an intermediate station for this unusual species between the Brisbane Ranges and its chief home in the Grampians – congratulations! *Calytrix tetragona* and *Pimelea curviflora* are "newies" too for Beckworth and I wonder however we all missed finding the *Calytrix* before now...³*

Stella and Pat attended FNCB excursions with their husbands and children, and later led excursions. Field naturalists' excursions combine discovery and learning with companionship with like-minded people who are interested in finding out about Australia's natural history. Some members develop expertise in specific subjects, while others are happy to learn a little bit about everything. In the 1960s, the club's fungus expert was Mrs Florence Chuk (née Egerton), who recalls arguments between her mother and her grandfather about her education. Her mother bought her botany books and succeeded in having Florence and her sister attend high school. After the war Florence became a maths teacher. She later attended Melbourne Teachers' College and much later completed a Bachelor's degree in Ballarat (Chuk 2016).

The social aspect of field naturalists' excursions complements the field work. Bill Murphy recalls '...the excursions – when we first joined, there were good crowds. We'd get home without tea about 8 o'clock in the evening. We'd take a table with us – or Stella would as Ted had a big car. And they'd bring out the table and we'd have a show and tell at afternoon tea time. Everybody took a plate and they shared a nice sponge or whatever' (Murphy 17 Feb 2017). While the social interactions of people getting to know each other well through field excursions over many years is certainly part of field naturalists' experience, it in no way lessens the seriousness of the field work, and I would argue, enhances it through discussion and shared learning. Less experienced members could show their finds to the group and have them identified, usually with some additional interesting information. Mary White, Headmistress of Ballarat Girls School, recalls 'The naturalists were a very friendly group; the most knowledgeable and senior members were always ready to explain things to the youngest and rawest recruit' (FNCB 1977: 45).

³ Letters in possession of descendants of Stella Bedggood.



Figure 4. Specimen of *Grevillea bedgoodiana* collected by Bon Strange, 17.10.1962 (MEL 98978). Label written by Jim Willis



Figure 5 a. Mrs Bon Strange c1950; **b.** *Grevillea bedgoodiana*. Photo by Emily Noble

In addition to FNCB excursions, Pat and Stella often went to Enfield Forest and other areas around Ballarat on weekdays while their children were at school and together they found and identified many plants. They became friends and the time spent together over ten years out exploring the bush was a joy to both of them. Both women kept plant lists and both obtained collecting licences and took specimens of plants. In the way of field naturalists, they occasionally sent carefully labelled specimens to MEL because they were unusual in themselves (e.g. hybrids) or unusual in that particular location. Six of Stella's specimens are held at MEL (see Appendix 1).

It is perhaps a measure of Jim Willis's regard for Stella as a botanist that the Enfield Grevillea (*Grevillea bedgoodiana* J.H. Willis ex McGill.), a species endemic to Enfield Forest, was named after her by Don McGillivray on Jim's suggestion. FNCB Minutes (22 October 1962) report that a specimen of this creeping grevillea was collected on an FNCB excursion to Enfield on 23 September 1962 and sent to Jim Willis at MEL who 'stated that it is an undescribed species'. The specimen now held at MEL was collected by FNCB member Mrs Bon Strange on 17 October 1962 so was possibly a follow-up to the initial specimen which doesn't appear to be still in existence (Figs. 4, 5). Bon Strange was born Myrtle Lorensene, the eldest daughter of farmers at Scotsburn near Ballarat. She completed her primary education and continued on to Ballarat High School with hopes of

becoming a teacher, but 'her hopes were thwarted by the onset of the Depression, as the Government closed teachers' colleges and put off teachers' so she returned to work on the family farm (Beggs-Sunter 1995). MEL holds 15 species collected by Bon Strange between 1961 and 1982 (see Appendix 1).

The Enfield grevillea was not named until 1986, eight years after Stella died, when it was described as a separate species based on a type specimen collected by A.C. (Cliff) Beaglehole and the Field Naturalists' Club of Ballarat in 1978 at Little Hard Hills in Enfield Forest as part of the Land Conservation Council survey (McGillivray 1986:3). Pat Murphy was almost certainly involved in the collection of this specimen as she accompanied Cliff Beaglehole daily and assisted him in finding plants for the LCC survey. The LCC Report on the Ballarat area mentions it as a rare/interesting species 'Grevillea sp., Enfield Grevillea' (LCC 1980: 99). Cliff Beaglehole records it in *The Distribution and Conservation of Vascular Plants in the Ballarat area* in 1983 as '*Grevillea* sp. aff. *aquifolium*', suggesting that it was a species awaiting description, and listed it as a 'rare-interesting-restricted' species (Beaglehole 1983: 71). He includes a record from Wombat State Forest, which was actually *G. repens* F.Muell. ex Meisn. Interestingly, there is a much earlier specimen of the Enfield Grevillea at MEL, collected at Smythesdale in 1879 by C. Collyer, but Neville Walsh notes that at that time it would have been regarded as part of the variable *Grevillea aquifolium* Lindl. Enfield

State Park was originally part of a much larger area known as Smythesdale Forest.

Pat learned plant identification in the field from Stella. Both women used keys for identification. There were no local field guides, and information came from Jim Willis's two-volume *Handbook to Plants in Victoria*, and later the many volumes of *Flora of Australia*. FNCB member Margaret Rotheram recalls Stella sitting on an old tree stump in the bush with a volume of Jim Willis's *Handbook* on her knee, explaining to a group of club members how to key a plant (Rotheram 2016).

In addition to his professional work as a botanist, Jim Willis was an active member of the FNCV. He valued the botanical contributions of field naturalists and was an encouraging and reliable mentor for many, including Stella and Pat. He was also 'a regular contributor' to *The Victorian Naturalist*, and led 'countless expeditions' (Costermans 1995). He shared field naturalists' love of nature and enjoyed being outdoors (Willis 1975: 72). Helen Aston writes 'In the field, Jim's energy and enthusiasm knew no bounds. Time would be forgotten as he searched and collected and he has been known to descend the most rugged of mountains in the dark alone after having failed to notice how rapidly daylight was departing' (Aston 1996: 3). Many field naturalists would relate to that! Jim sometimes joined FNCB excursions (Fig. 6). Members recall that he usually wore a suit, and carried dissecting pins in his lapel, but he was happy to get down on his knees to look at plants, talk to the children and sit on the ground to have a cuppa and chat (Dalman pers comm. 2017). In the 1960s, he sometimes travelled to Ballarat by train and stayed with the Bedggoods. In 1964, Jim Willis provided a plant list and a map plotting significant flora to the Forests Commission to support the FNCB's submission against replacing native flora at Mount Beckworth with pine plantations (FNCB Minutes, 24 March 1964). He continued to take an interest in Mount Beckworth and supported the Club's submission to stop sand mining and have the area set aside as a reserve, writing to Stella on 17 May 1966:

I share your distress at the turn of events at Mt. Beckworth. I have written straight away to Mr Incoll [District Forester] suggesting that alternative sites for sand pits be found; but I fear it is only going over the same ground with him that I did two years ago and that little can be done to check



Figure 6. Jim Willis on FNCB excursion. Photo by Peter Fry (permission received from Edith Fry)

*the removal of readily available granite sand. The plant in really imminent danger seems to be *Viminaria juncea* ("Golden Spray") ... It's the only patch, quite a small one, of *Viminaria* within 50 miles and it would be a thousand pities to see it bulldozed out of existence there...*

Allan Sonsee, one of the founding members of the FNCB's reincarnation in 1952, corresponded with Jim Willis for many years, beginning well before the 1950s (Fig. 7). They shared a love of plants, and of the bushland around Creswick.⁴ They probably met in the late 1920s when Jim was studying at Creswick School of Forestry and Allan was a young teacher at Smeaton near Creswick. Allan later taught Nature Study at Ballarat Teachers' College from 1947 to 1976. During these years he often took interested students on weekend rambles through the Creswick bush with a copy of Jim Willis' (unpublished) *Synopsis of the Indigenous Plants occurring within a ten-mile radius of Creswick* in hand, looking for plants in the *Synopsis* and trying to find new ones not listed (WILL002). Allan wrote to Jim

⁴ Jim Willis gave the inaugural Stella Bedgood lecture in Ballarat on 1 June 1979 and titled it 'For the love of Creswick'.



Figure 7. Allan Sonsee. Photo by Peter Fry (reproduced with permission from Edith Fry)

in November 1951 'It is with the students I can do my best work re preservation as they go out to schools all over Victoria'. Allan occasionally sent specimens to Jim for identification or because they were of interest. On one occasion he discovered a small group of Elbow Orchids. He wrote to Jim telling him, but did not send a specimen because 'I think it is unnecessary, and I value it too highly to subject it to the tender care of the G.P.O.'. He later found another colony and noted that although it was too late this year, his next task would be 'to try to solve the method of pollination'. In 1953, he sent two orchid specimens with suggested identifications. Jim Willis confirmed that one was *Calochilus campestris* R.Br. and the other was *Prasophyllum odoratum* R.S.Rogers. Allan wrote back that he was 'very excited' to have found *Calochilus campestris* as 'I have long wanted to compare the two species of *Calochilus* listed for Creswick ... It was an even greater thrill to learn I had rediscovered one of your "findings" of 1928. *Prasophyllum odoratum* should now stay discovered ... I am now gradually finding the species listed as rare in your Synopsis...'. It is a measure of Allan's regard for Jim that when he proposed to visit Creswick in 1953, Allan hoped he would be at home because 'One day spent with you, is worth a year's botanying alone.' MEL holds eleven

specimens collected by Allan between 1942 and 1968 (see Appendix 1). In the 1960s, Allan ran a weekly nature segment for children titled 'Mr Nature Man' on the local television station (BTV 6). On Allan's retirement he was described as 'probably the best known and certainly one of the most highly respected educationists in this Region' (Education Department of Victoria 1976). Like Jim Willis, Allan Sonsee answered numerous letters and queries from teachers, students, school children and field naturalists, 'nor did he spare himself in the process' (Education Department of Victoria 1976).

These gentle, knowledgeable men were early influences on Stella and Pat. However, both women developed their own knowledge of botany and over time came to know the local area in a very 'field natty' way, understanding seasonal changes, identifying plants, knowing their described distribution, soil preferences and plant communities, learning about each species through a combination of observation, discussion and reading. Ballarat is surrounded by different types of geology and soils, with different plant communities, ranging from the southern limits of box-ironbark forests to volcanic plains and lakes, so there was plenty of variety of flora to study.

Photography was also something Stella took up with great interest, learning initially from fellow FNCB member Mr George Howman and soon having considerable success as a member of the Ballarat Camera Club. Some of Stella's photos were selected for the national *Photoflora* exhibitions run by the Society for Growing Australian Plants and many were published in Ballarat's newspaper, *The Courier*. Her photos of fauna are remarkable considering the equipment available at the time (Fig. 8). Pat also took photos, but these were mainly for her own records and identification purposes.

Pat was unassuming although very knowledgeable. FNCB member and DELWP staff member Elspeth Swan recalls that she was usually at the back of the group on club excursions, photographing some plant or other (Fig. 9), but if you paused and asked what she was photographing, she was happy to tell you (Swan, pers.comm. 2017). Pat's interest in plants was further increased after she helped Cliff Beauglehole to find and collect specimens as part of the Land Conservation Council survey of the Ballarat region. Prior to Cliff's visit, the Field Naturalists' Club of Ballarat was asked

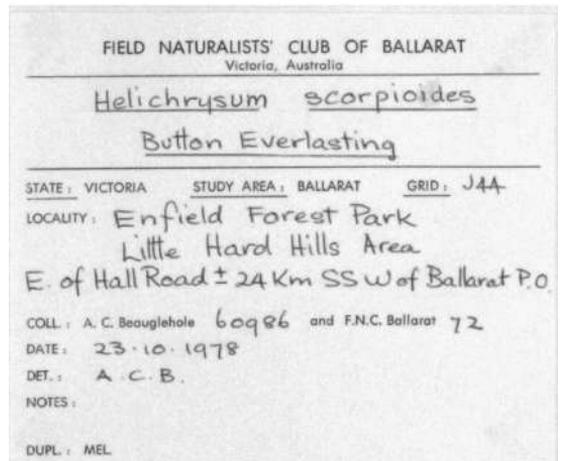


Figure 8 a. Feathertail Glider; **b.** *Caladenia clavigera* (recently re-found at Enfield by Emily Noble and FNCB). Photographs by Stella Bedggood (permission received from Ian Pym)



Figure 9 (left). Pat Murphy photographing a lizard on an FNCB excursion. Photograph by Peter Fry

Figure 10 (below). Label from Cliff Beauglehole's Ballarat herbarium, acknowledging FNC Ballarat as secondary collector



to prepare detailed plant lists. This was done primarily by Stella and Pat. However, Ballarat was one of the last regions to be surveyed, and Stella died in May 1978. Pat continued to make lists, sometimes accompanied by FNCB member Margaret Rotheram. Margaret recalls that lists had to be provided to the LCC in a very short time-frame in the middle of winter, which was challenging as Pat had to identify many plants by a leaf just beginning to appear (Rotheram 2017).

When Cliff visited Ballarat on collecting trips, he stayed with the Murphy family at their home in Dana Street, on one occasion staying for two weeks. Pat accompanied Cliff every day to locations around Ballarat. Bill Murphy would come home from work at lunchtime to put the dinner on, then Pat would return in time to serve it. In the evenings, other members of the FNCB, particularly the Secretary, Helen Burgess, came to the house and helped to sort and press plants until midnight. Margaret Rotheram, a journalist, stayed late after work at *The Courier* each night using the long-carriage typewriter to produce Cliff's landscape-format plant lists with multiple carbon copies. Roger Thomas, a noted Ballarat naturalist and member of FNCB, assisted with information on where plants of interest might be found. The labels on specimens in Cliff's Ballarat herbarium give the Collector as 'A.C. Beaglehole and F.N.C. Ballarat' (Fig. 10). Cliff also acknowledges members of Ballarat Field Naturalists' Club in The Distribution and Conservation of Vascular Plants in the Ballarat Area, including Greg Binns (President), Helen Burgess, Pat Murphy, Margaret Rotheram and Roger Thomas as well as Harry Barclay from Creswick Field Naturalists' Club and Zoe Banfield from Ararat Field Naturalists' Club (Beaglehole 1983: 9). Bill Murphy notes that not all field naturalists' clubs provided this extensive assistance to Cliff in his work, but FNCB put in considerable effort to what they believed was a valuable project (Murphy 4 May 2016). Greg Binns was also President of the Western Victorian Field Naturalists' Association and Margaret Rotheram was Secretary from 1978 to 1980, at a time when the organisation was managing funds for the publication of Cliff's books.

Even a cursory glance at Cliff's herbarium shows how hard they all worked to collect, press, label and record so many specimens in a short time. On 23 October 1978, Cliff and Pat visited Enfield Forest Park, collecting 103

specimens. On 25 October, they visited Enfield again, collecting another 33 specimens. On 26 October they visited Mt Erip, collecting 19 specimens, and on 27 October they returned to Mt Erip, collecting another 12 specimens there and three at Happy Valley. Cliff spent early November collecting around Ararat and in mid-November returned to Ballarat collecting north of the city in areas including Creswick, Barkstead and Elmshurst.

Bill Murphy says Cliff 'was an inspiration and he was very generous with what he knew which was quite considerable.' He remembers Cliff saying to Pat: 'If you haven't got a plant list you don't know what is there. And if anything is in danger of being taken over, if you've got a plant list you are able to say what's there and why it should be protected.' Cliff also encouraged Pat to expand her collection, and after his visit, she continued to explore the region, updating her lists and collecting specimens (Murphy 2015). However, Pat's collection does not repeat Cliff's and clearly she was not trying to re-find species she had collected with him in 1978. Rather, her interest was in finding different species or the same species in locations where they had not been previously collected.

After Bill retired in 1987, he and Pat went out together and Bill took photographs of plants for her (Fig. 11). It was at this point that Pat's collection changed from occasional specimens of plants which were unusual in themselves or in a particular location, to an extensive collection of all plants, and the collection itself became her focus along with her plant lists. Bill also became knowledgeable about plants, but not to the same level as Pat, and he saw his role as supporting her in her botanical work. I asked Bill some of the questions that Frieda Knobloch would have liked to ask Ruth Aven (Knobloch 2005: 123). I also asked some other field naturalist couples what it meant to them to go out together to explore the local bushland. Peter Noble, whose wife Emily is Secretary of the FNCB and a passionate conservationist with a particular interest in orchids, explained that there is a lot of fun and enjoyment in the shared experience of going out into the bush together. Emily keeps extensive spreadsheets of the plants of Enfield Forest. Peter doesn't identify plants and doesn't keep lists, but if Emily shows him an orchid she is looking for he goes off and finds other patches of it for her. Peter, a psychologist,



Figure 11. Bill Murphy aged 89, lying full length on the ground to photograph an orchid, 2017. Photograph by Emily Noble

refers to shared activities of couples as ‘social partnering’ (Noble 2017). Another couple who belong to FNCB and go to most of the club excursions, but also try to go out together once a month, commented ‘We just like to go out there and stop in a spot and see what we can see and I think that’s the benefit of having two people out there because I walk past something and Paul says “Did you see that?”’ (Swan 2017). Frieda Knobloch writes of the Nelsons ‘It is obvious you were enjoying what you were doing, and if botany was the point, there was still much more going on’ (Knobloch 2005: 89). In the case of Pat and Bill, there was certainly something ‘going on’ in addition to botany. Bill recalls ‘We weren’t kissy types, but if I found something that was rare, I’d get a kiss!’ (Murphy 2017).

Frieda Knobloch writes about the associations of field work and experience, and how the experience of looking through the specimens she collected ‘brought whole days back to me ... each of the plants I collected is a looking glass to step through...’ (Knobloch 2005: 95). I mentioned this to Emily Noble, who is currently re-finding the plants on Pat’s Enfield list with help from Bill Murphy, and adding new ones. Emily described in a similar way how the field work of finding plants becomes

part of a whole experience. For Emily, who keeps records and makes submissions to land management authorities but doesn’t collect specimens, it was not a specimen but a song that brought back a day of botanising for her:

Pete doesn’t always like the same kind of music that I do and he commented ‘I don’t know why you like that song.’ I first heard that song when I was driving out on Clarke’s Road with Bill Murphy to find a Dainty Wasp Orchid [Chiloglottis trapeziformis W. Fitzg. – one of the plants on Pat’s Enfield list from an FNCB excursion in 1999]. I had never seen a wasp orchid, so I was excited about seeing one, and I was going to a new place, and we were driving along the track with that song playing. It has such strong associations with that day that whenever I hear it I remember all the things about that day (Noble, 2017).

Pat had favourite places to go looking for plants – specific areas in Enfield Forest, Mt Beckworth, Fell’s Gully near Clunes – but she also liked to explore other places. As she said to Bill ‘You never know what you’re going to find’ (Murphy 17 Feb 2017). Changing seasons, different years, dynamics of the forest (Hateley 2010: 162) and other factors not yet fully understood meant that plants might appear that had not been seen before in that location, or not for many years. Pat’s anticipation of potential

discovery reminds me of a comment by Allan Sonsee to Jim Willis: 'For some reason I cannot, myself, put into words, I delight in plants. There is always something new to find out about them, some secret well kept...' (WILL002, letter from Allan Sonsee 24 Nov 1953).

When going out to look for plants, Pat would take a telephone book and sheets of paper with her and place specimens in the book immediately after they were collected. Then, at home, she would place them into a press made for her by Bill not long after Cliff's visit in 1978, which held up to 50 specimens. When the press was full, she would remove and file the specimens and begin again. She carefully labelled each specimen with information including date of collection, specific location, and often notes about specific features of the plant or the type of environment or plant community where it was growing (Murphy 2016).

Pat kept meticulous lists for each specific reserve or park. She made a new list each time she went out, so that she would not be influenced by previous findings. Then she would come home and update her ongoing list on the computer for that location, while Bill prepared dinner (Murphy 2016). Pat's lists for Enfield (1999), Mt Beckworth (2000), Canadian Reserve (2001), Linton BOC block (2002) and Bushranger Bushland Reserve (2005) are held by the FNCB and are still used by members.

Unlike Stella, Pat did not see herself as a conservationist. However, she was the FNCB's representative on the Bittern Lagoon Advisory Committee in 1980 and led working parties of inmates from Langi Kal Kal Youth Training Centre to plant vegetation around the Lagoon (FNCB Minutes July 1980; Aug 1980). The Lagoon was on Langi Kal Kal land, and the project included constructing a channel and mending breaches of Emu Creek to bring more water to the Lagoon, building a fence to keep stock out, using bulldozers to create islands in the lagoon and planting 500 trees and shrubs (FNCB Newsletter, Aug. 1980: 5). Community organisations including FNCB were invited to participate. In July 1981, FNCB member Dr Frank Harrap reported that brolgas had returned to the lagoon and in August 1981 Pat Murphy reported one brolga still at the lagoon (FNCB Minutes 1981). Bill Murphy recalls that there were several FNCB working bees to plant vegetation around the lagoon:

Some of those poor kids get a bad name but they haven't had much of a chance. We found they were good kids and

enjoyed our company and we enjoyed them. I think Pat went once or twice and spoke to the kids about plants. She used to get on pretty well with the kids, probably having five of our own (Murphy 2016).

In the late 1980s, Pat was influential as a member of the study committee that succeeded in having the Ballarat–Skipton disused railway line turned into a reserve and 'rail trail'. Her detailed survey of the flora along this trail was used in the submission, along with a survey of a section of the trail by another member of FNCB, Roger Thomas (Harrison 1989: 17, 51). The report divides the railway line into segments, with detailed descriptions of the vegetation in each segment. In 1990, Pat was appointed the Conservation Council of Victoria's representative on the Local Advisory Committee for the rail trail (LAC 1990: 9). She reported back to the FNCB, and the President's Report in 1992 notes 'a special thank you to Pat Murphy for her work on the Ballarat to Skipton disused rail line study committee' (FNCB Minutes March 1992). Several specimens in Pat's herbarium were collected along this disused rail line.

Along with other members of FNCB, Pat and Bill Murphy also joined the Australian Plants Society Ballarat (formerly the Society for Growing Australian Plants – Central Highlands Group). In 1992, Pat wrote a series of 26 short articles for their newsletter, each describing a local orchid. She provided line drawings of the orchids to accompany the articles. These were botanical drawings showing the features of the plant (Fig. 12). The articles explain the local distribution and flowering time of each



Figure 12. Pat Murphy's line drawing of **a.** *Diuris chryseopsis* and **b.** *Pterostylis nutans* in SGAP newsletter, 1992

orchid and its method of pollination, as well as giving a description of its botanical features.

Pat was always interested in learning more about botany. In 1993 she and another FNCB member, Elspeth Swan, attended an adult education course in plant identification run by Ballarat University lecturer John Miller. It was an evening course including plant keys, terminology and plant characteristics. Elspeth recalls '... we went armed with a desk lamp and hand lens. I think Pat was interested in learning how to identify members of the daisy family ... We both had a level of skill before we went but Pat always had more patience than me and used her ID skills on probably a daily basis...' (Swan April 2017). Pat's herbarium includes 132 specimens of Asteraceae from 101 different species.

In 1993, Dr Ken McDonnell, President of FNCB, presented Pat Murphy with the FNCB Medal for her work as committee member and newsletter editor, excursion leader, speaker at club meetings, and representing the Club on community organisations (Fig. 13a). The minutes note 'Her botanical knowledge and willingness to share this with people is outstanding' (FNCB Minutes 1993).

In February 1995, bushfires swept through Enfield Forest, devastating some of the areas where Pat and Bill often went looking for orchids and other plants. Pat set out on a project to document the regeneration and for a whole year she and Bill visited Enfield every week, noting which plants reappeared. For the first few months, there was very little growing where the fire had burnt, but at that time Pat and Bill discovered Dereel Bushland Reserve, which had not been burnt and had a surprisingly rich variety of plants, particularly orchids. Then the plants started to reappear in the burnt areas. In May 1995, Pat reported to FNCB that Parson's Bands (*Eriochilus cucullatus* (Labill.) Rchb.f.), Bearded Midge Orchids (*Corunastylis morrisii* (Nicholls) D.L. Jones & M.A. Clem.) and Yellow Wood Sorrel (*Oxalis perennans* Haw.) were in flower, and *Grevillea bedgoodiana* was shooting (FNCB Minutes May 1995). In October 1995, she reported seeing owls, Scarlet Robins and Spotted Quail-thrush. After the year ended, Pat continued to observe the regeneration. In September 1996, she reported wallabies returning to burnt areas at Enfield, along with sightings of Spotted Quail-thrush and the reappearance of bush peas (FNCB Minutes Sept 1996). In December

1997, she reported that bushfires at Enfield had resulted in germination of pod-bearers' seeds (FNCB Minutes Dec. 1997). Some of the plants in Pat's herbarium were collected at Enfield Forest during this project, including Rock Fern and Blanket Fern.

In 2003, Pat was asked to survey water reserves managed by Central Highlands Water. Her lists are still in existence for nine of these reserves: Amphitheatre Reservoir, Bostock Reservoir, Centenary Reservoir, Evansford Reservoir, Mosquito Dam, Musical Gully Reservoir, Newlyn Reservoir, Talbot Reservoir and Wilsons Reservoir. This was an extensive task, including native and introduced flora as well as fauna seen during the surveys. The plant list for Bostock Reservoir alone includes 135 species.⁵ It is interesting that there are no specimens from the water reserves in Pat's herbarium. Perhaps she did not have permission to collect during her surveys.

In later life, Pat worked on a field guide to the *Wattles of Ballarat*, intended for anyone interested in identifying the local acacias (Fig. 13b). This was her project, and although she died before it was finished, the guide was completed by the FNCB and Bill Murphy and was produced by the FNCB in 2009. The introduction explains that the idea for the publication originated with Pat, noting 'Pat had been quietly and methodically researching, seeking, documenting and identifying our district *Acacia* species. Bill had assisted and diligently photographed the selected plants' (FNCB 2009, 3). The guide covers acacias found within 40 kms of Ballarat and includes 21 naturally-occurring species and three introduced species. Some of Bill's photos were used along with others taken by FNCB members Carolyn Hall and John Gregurke.

Pat died on 23 September 2006. She had arranged to lead an excursion to a historic private property near Beaufort in November, and had already drawn up a comprehensive plant reference list. The Murphys' daughter Chris Chapman stepped in to lead this excursion in her mother's place, assisted by her father. Another daughter Marg and the Murphys' son Graeme and his wife and their three children also attended this excursion. (FNCB newsletter Nov 2006: 3-4) Pat's children share a love of plants and gardening, and

⁵ Lists were provided to me courtesy of Central Highlands Water.

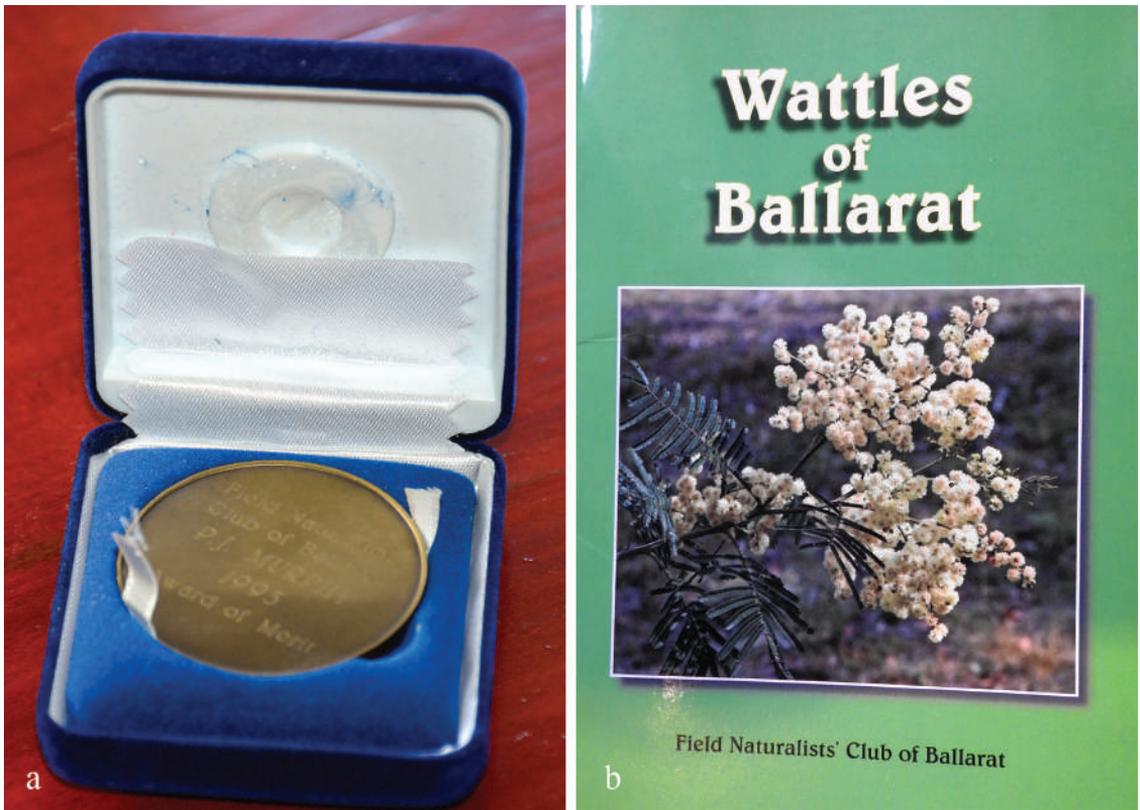


Figure 13 a. Pat Murphy's FNCB medal awarded 1993; **b.** *Wattles of Ballarat*

Table 1. Fifteen specimens contributed by Pat Murphy to National Herbarium of Victoria (MEL) during her lifetime.

Date	Name of species	Place of collection
June 1983	<i>Prasophyllum morrisii</i> (or <i>Corunastylis morrisii</i>)	Enfield State Park
28 June 1983	<i>Gleichenia microphylla</i> R. Br.	Enfield State Park
4 July 1983	<i>Acianthus pusillus</i>	Dereel Lagoon Wildlife Reserve
23 Sept 1989	<i>Leucopogon glacialis</i> Lindl.	Enfield Forest Park
29 April 1990	<i>Cuscuta epithymum</i> (L.) Murray	Mt Mercer
3 May 1992	<i>Eucalyptus ? aromaphloia X yarraensis</i> Maiden & Cabbage	Durham Lead
24 Aug. 1992	<i>Lycopodium deuterodensum</i> Herter	Wombat State Forest
7 Nov 1993	<i>Brachyscome debilis</i> Sonder	Clunes Forest
22 Feb 1995	<i>Eleocharis pusilla</i> R. Br.	Winter Swamp
1 Nov 1995	<i>Prasophyllum suaveolens</i> D.L. Jones & R.J. Bates	Dowling Forest Cemetery
22 Oct 1998	<i>Chiloglottis X pescottiana</i> R.S. Rogers	Enfield Forest
20 Sept 1999	<i>Chiloglottis X pescottiana</i> R.S. Rogers	Enfield
20 Sept 1999	<i>Chiloglottis trapeziformis</i> Fitzg.	Enfield
20 Aug. 2003 (2 specimens)	<i>Pterostylis chlorogramma</i> D.L. Jones & M.A. Clem.	Linton Flora and Fauna Reserve

exchange plants for their gardens, but none have taken up botanising in their mother's footsteps. Chris explains that while they all admired their mother's ability to remember the botanical names of plants, this is not a talent her children have, though she says 'My son has that sort of recall memory. Sometimes it does skip a generation' (Chapman 2017). Marg Murphy agrees that they were all proud of their mother and appreciate her legacy of a love of plants, though for them it was the garden rather than the bush. She also points out that her generation work and have families and are 'time-poor', as are the next generation, though Bill Murphy takes his grandchildren and great-grandchildren along on field naturalists' excursions occasionally when they have the time (Murphy, M. 2017).

Fifteen specimens

During her lifetime, Pat sent fifteen specimens of thirteen different species to MEL between 1983 and 2003, either for confirmation of identification or because there were some unusual features about the plant or because it was unusual for the location where it was found (Table 1). Bill Murphy recalls driving to the Herbarium at least once with specimens in a large manila folder between cardboard. At other times Pat would place specimens between cardboard and then into envelopes and post them to the Herbarium.

These specimens were sometimes accompanied by letters explaining particular features of interest. A specimen of *Cuscuta epithymum* (L.) Murray (Common Dodder) collected on the Mt Mercer–Shelford roadside reserve (Fig. 14), includes the following note:

'Several years ago this plant covered several kms of Poa-Themedra grassland along this road. It was almost impenetrable, but has been somewhat diminished by firebreak burning and ploughing.'

Pat's herbarium

In 2007 Pat's husband Bill and daughter Margaret donated her collection of specimens to MEL. In order to be accepted, a collection must be of a high standard that will be useful to future researchers. Bill Murphy has the letter from Dr Josephine Milne, Collections Manager at MEL, dated 8 November 2007, thanking him for

visiting to deliver Pat's herbarium 'comprising 62 folders of pressed and named specimens'. Dr Milne writes:

'Pat's collections will be a valuable addition to the scientific component of the State Botanical Collection at the NHV [National Herbarium of Victoria = MEL]. These collections will complement the 15 specimens collected by Pat that are already lodged in the herbarium' (Milne 2007).

I asked Dr Milne about the value of Pat Murphy's collection when I visited the Herbarium in April 2016. She explained:

'Pat had a really good knowledge of the flora of the area. The information that went with each specimen was detailed and useful. When we were offered her collection by her husband and daughter, we already held some of her materials here, so we knew the quality of her specimens and observations. I also consult with botanists here at the Herbarium who help me to decide whether or not to accept a collection. In this case we were pleased to accept. It is also of interest because she was a female collector' (Milne 2016).

Pat Murphy's herbarium has not been curated. It is stored in cupboards in the folders as it was donated in 2007. This enabled me to examine it as a collection, rather than as re-mounted individual specimens. Pat's specimens are arranged in folders by plant family. There are 1123 specimens, comprising 859 species, from 106 plant families. Not all of these are native. Some are introduced and some are weeds – because it is important to know where introduced species and weeds thrive as well as to know where there are valued native species.

Analysis

Pat Murphy's specimens were collected over 16 years, from 1989 to 2005, apart from three earlier specimens sent to MEL in 1983. *Gleichenia microphylla* R.Br. (Scrambling Coral Fern) collected in Enfield State Park was cited by Beauglehole (1983) as an example of one of ca 480 rare and/or interesting species from the Ballarat study area (Figs. 15,16).

Apart from the specimens dated 1983, all of the others in Pat's herbarium were collected after Bill's retirement. As we know she collected from the late 1960s onwards, and Bill doesn't think she would have discarded any specimens, one possibility is that she collected for Cliff Beauglehole before 1983, though there is no actual evidence to support this. Cliff's Ballarat

herbarium, in which specimens are attributed to 'A.C. Beaglehole and FNC Ballarat' has been incorporated into MEL and a duplicate was given to FNCRB which was gifted to Federation University in 2011. While there is no specific reference to Pat as collector, she was the person from FNC Ballarat who went with Cliff to find and collect specimens. Another possibility is that Pat's collecting may have been limited to FNCRB excursions after Stella died in 1978, due to not having a companion to go out with apart from weekends until Bill retired. Bill recalls

one day when they were out in the bush and noticed a man nearby who ducked behind a tree each time they looked up. They decided to go back to the car and leave the area (Murphy 2017). Not going out alone may have reflected Pat's concerns about personal safety alone in the bush while absorbed in a task, or it may have been that the activity was less appealing when not shared. Either way, if this were the case, it would indicate that botanical companionship was an important aspect of field work, and perhaps an essential one.

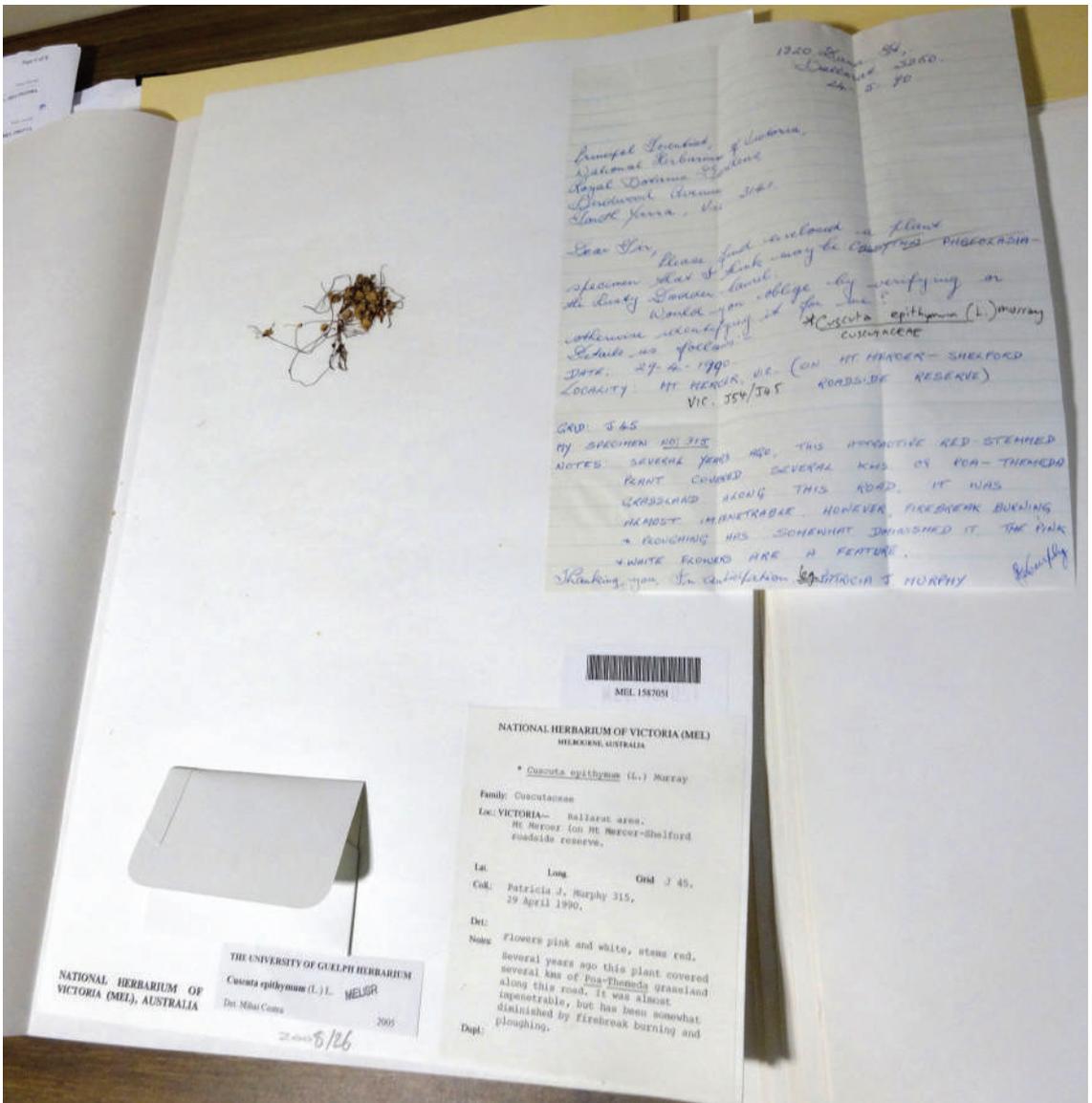


Figure 14. Curated specimen of *Cuscuta epithymum* (L.) Murray collected by Pat Murphy, 29 April 1990, including letter from Pat. (MEL 1587051)

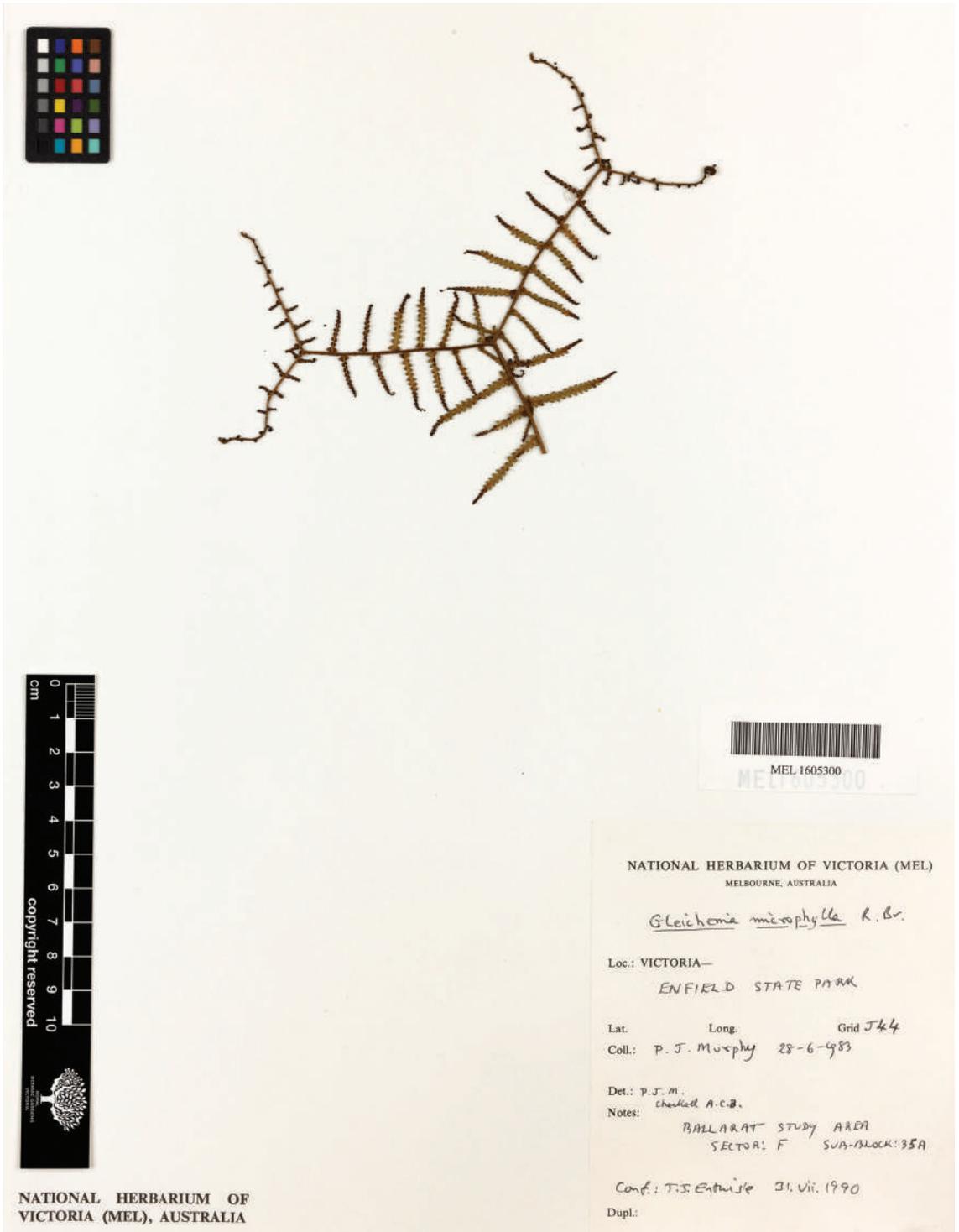


Figure 15. *Gleichenia microphylla* R.Br. Photograph reproduced with permission of RBGV. Curated specimen collected by Pat Murphy 28 June 1983 (MEL 1605300)



Figure 16. *Gleichenia microphylla* R.Br (Scrambling Coral Fern) at Enfield 2016. Photograph by Susan Kruss

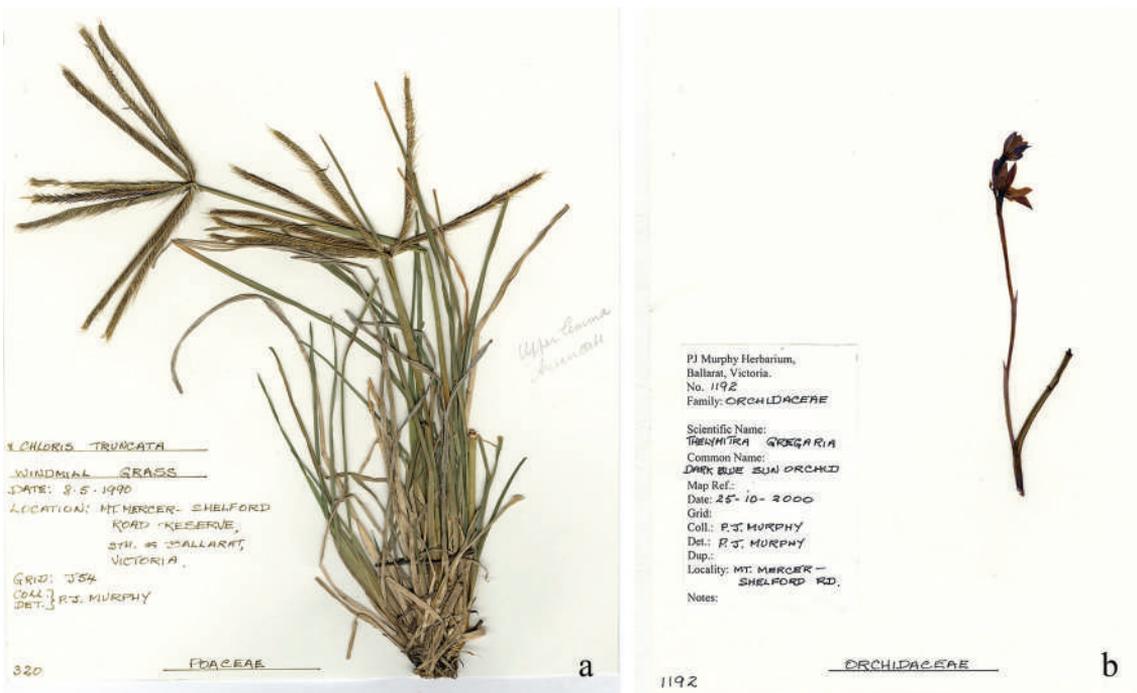


Figure 17. Collections by Pat Murphy. **a.** Specimen of *Chloris truncata* R.Br. (Windmill-grass) at Mt Mercer-Sheffield Road Reserve 8 May 1990; **b.** Specimen of *Thelymitra gregaria* D.L.Jones & M.A.Clem. (Dark Blue Sun Orchid) at Mt Mercer-Sheffield Road Reserve, 25 October 2000; considered endangered, endemic to the Victorian Volcanic Plains Grasslands

None of Pat's specimens is duplicated in Cliff Beauglehole's collection from his 1978 LCC survey of Ballarat. Therefore they complement Cliff's Ballarat collection. A brief comparison of Cliff's Ballarat collection of 352 specimens with Pat's herbarium is useful. Pat collected many more species than Cliff, reflecting the longer time period over which she collected. This is particularly noticeable in the families Asteraceae (101/49), Campanulaceae (15/4), Mimosaceae (17/6) and Orchidaceae (76/20), reflecting her particular plant interests. Cliff's collection includes 78 species not collected again later by Pat. In particular, Cliff collected six species of *Senecio* that were not collected by Pat, five species of *Trifolium* and seven species of *Eucalyptus*. Margaret Rotheram notes that one of Cliff's major interests was 'deficiencies' – plants known to be rare or have limited distribution in particular areas (Rotheram 2017). However, many plant families were not collected at all by Cliff in his Ballarat herbarium, but were later collected by Pat, including Poaceae of which she collected 83 species. Therefore taking the two collections together provides a much better understanding of the flora of the area than either one alone.

While Pat and Cliff both collected at Mt Langi Ghiran, Mt Buangor and Mt Cole, Pat did not collect in the area south of Ararat around Willaura and Rossbridge, but she did find many of the same species in locations much closer to Ballarat. From a field naturalist's point of view the area south of Ararat would have been considered to be in the Ararat Field Naturalists' Club area, with no connection to Ballarat, whereas the Mounts are located between Ballarat and Ararat and ideal for joint excursions of the Ararat and Ballarat clubs. It is interesting that the main submission to the LCC on the Mt Cole Range was written by the Geelong Field Naturalists' Club with the support of the Western Victorian Field Naturalists' Clubs Association. This was possibly because John R. ("Jack") Wheeler, brother of ornithologist Roy Wheeler and co-founder of the Field Naturalists' Club of Ballarat with Allan Sonsee, had moved to Geelong and was the President of the Geelong Club at the time (GFNC 1973). The Ballarat field naturalists were fully occupied with helping Cliff and preparing their own submission to the LCC which resulted in Enfield Forest and other areas being protected. Pat's collecting area also included Mt Beckworth and Wombat Forest, both close to Ballarat but part of different LCC regions.

Most of Pat's specimens were collected from reserved land – Flora and Fauna Reserves, State Forests, Forest Parks, Conservation Parks, National Parks, Roadside Reserves, Scenic Reserves, Heritage Parks, Bushland Reserves, rail reserves, town commons, water reserves and one specimen from Devil's Kitchen Geological Reserve. The remainder were collected from cemeteries, around lakes and swamps, river banks and roadsides (Fig. 17).

The vast majority of specimens in Pat's herbarium was collected from areas within a day's drive of Ballarat (1090 specimens). The exceptions are eight from the Lakes Entrance region in Gippsland where one of Pat and Bill's daughters was living, and some collected on holiday trips – one specimen at Eden in NSW in 1992, one at Kentucky State Park NSW in 2000, and two at Warrnambool in 1993. Two specimens were collected from the Grampians in 1994, one in 1996, one in 1998 and seven in 1999. In 1995 Bill and Pat travelled to South Australia, collecting a specimen from Little Dip Conservation Park, one from Beachport, one from Robe and one west of Millicent. In August 2001 they travelled to Broken Hill via Mildura, collecting one specimen at Pooncarie and one at Menindee and two at Speed in the Victorian mallee. Two specimens were collected at Sorrento in 1999.

Of the Ballarat specimens, approximately 130 were collected at Enfield, 38 from Rokewood, 29 from Lal Lal and 17 from Buninyong. Other sites included Dowling Forest, Mount Beckworth, Canadian Forest, Mt Warrenheip, Blackwood, Haddon, Creswick Forest and St George's Lake, Napoleons, Mt Mercer, Linton and Dereel, Mt Doran Forest north of Elaine, Langi Kal Kal area, Yarrowee Creek, Spargo Creek, Lake Wendouree, Lake Burrumbeet, Winter Swamp, Flax Mill Swamp, Dereel Lagoon, the rail reserves from Ballarat to Skipton, Haddon and Lal Lal, and Pat's home at 1320 Dana St.

Approximately 36 species collected along the Ballarat–Skipton disused rail line range from trees such as *Allocasuarina littoralis* (Salisb.) L.A.S. Johnson (Black Sheoak) to tiny wildflowers such as *Pauridia* (formerly *Hypoxis glabella* (R.Br.) Snijman & Kocyan (Tiny Star) and include many native plants as well as both native and introduced grasses.

Some specimens were collected from a wider area around Ballarat including Paddy's Ranges and

Lillicur Forest near Maryborough, Sandon Forest near Newstead, Muckleford Forest near Castlemaine, Wombat Forest near Daylesford, Lerderderg State Park, Werribee Gorge, Fell's Gully north of Clunes, Buangor, Mt Cole and Langi Ghiran (near Ararat), Long Forest near Melton, the Rokewood–Cressy plains south of Ballarat,

Lake Corangamite, the Brisbane Ranges, Inverleigh and Bannockburn.

Six specimens in Pat's herbarium were collected by her brother, Ern Perkins (1934–2016), a science teacher who became interested in botany separately from Pat and joined Colac Field Naturalists' Club and later



Figure 18 a., b. Specimens of *Pterostylis falcata* collected by Pat Murphy at Enfield 15 December 1989 and 28 November 1995, considered by Beauglehole (1983) a rare and/or interesting species from the Ballarat study area; **c., d.** *Pterostylis falcata* rediscovered at Enfield by Emily Noble, November 2016. Photograph by Susan Kruss



Figure 19 a. Specimen of *Thelymitra flexuosa* collected by Pat Murphy at Haddon Common on 24 October 1990, considered by Beauglehole (1983) a rare and/or interesting species from the Ballarat study area; **b.** *Thelymitra flexuosa* rediscovered at Enfield in 2016 by Bill Murphy. Photograph by Bill Murphy

Castlemaine Field Naturalists' Club. Ern's specimens included in Pat's collection were all from the Ballarat area – two from Lal Lal, and one from each of Guildford, Tullaroop Creek, Franklinford and Basalt.

Some of Pat's specimens were collected from roadsides, particularly along the Mt Mercer–Shelford Road. Bill Murphy says the Field Naturalists' Club of Victoria held an excursion to the volcanic plains south of Ballarat. Pat collected some specimens on that excursion and later went back to those areas at various times. Specimens from roadsides include grasses and wildflowers.

Pat's collection includes 107 specimens of orchids from 76 species. Genera include *Acianthus*, *Caladenia*, *Caleana*, *Calochilus*, *Chiloglottis*, *Corybas*, *Cryptostylis*, *Dipodium*, *Diuris*, *Eriochilus*, *Genoplesium*, *Microtis*, *Prasophyllum*, *Pterostylis* and *Thelymitra*. Of particular interest for the Ballarat region were *Thynniorchis huntianus* orth. var. D.L.Jones & M.A. Clem. (Elbow Orchid) in Enfield Forest Park in 1989, *Thelymitra flexuosa* Endl. (Twisted Sun Orchid) at Haddon Common in 1990 and *Pterostylis falcata* R.S.Rogers (Sickle Greenhood) at

Enfield Forest Park in 1989 and 1995 (previously found at Enfield by Ted Bedggood in 1967 and recorded in the FNCB minutes as the first time it had been found in the Ballarat area). In 2016 Emily Noble re-found a significant colony of *Pterostylis falcata* at Enfield Forest Park, having looked for several years without success, perhaps because it grows in very wet areas and in this wet year was found growing in several centimetres of water in a low area of the forest (Fig. 18). It was also in 2016 that Bill Murphy found *Thelymitra flexuosa* on private property in Enfield Forest – a species Emily Noble has yet to see at Enfield (Fig. 19). Bill Murphy recalls walking down to Misery Creek with Pat and Helen Burgess the day Pat found *Pterostylis alpina* R.S. Rogers growing there, though there is no specimen in her herbarium (Murphy 17 Feb 2017). This orchid has not yet been re-found at Enfield.

Ballarat is not often associated with ferns, but Pat collected several species (Fig. 20) including *Cheilanthes austrotenuifolia* H.M.Quirk & T.C.Chambers (Rock Fern), *Cheilanthes sieberi* ssp *sieberi* (Narrow Rock-fern), *Asplenium flabellifolium* Cav. (Necklace Fern),

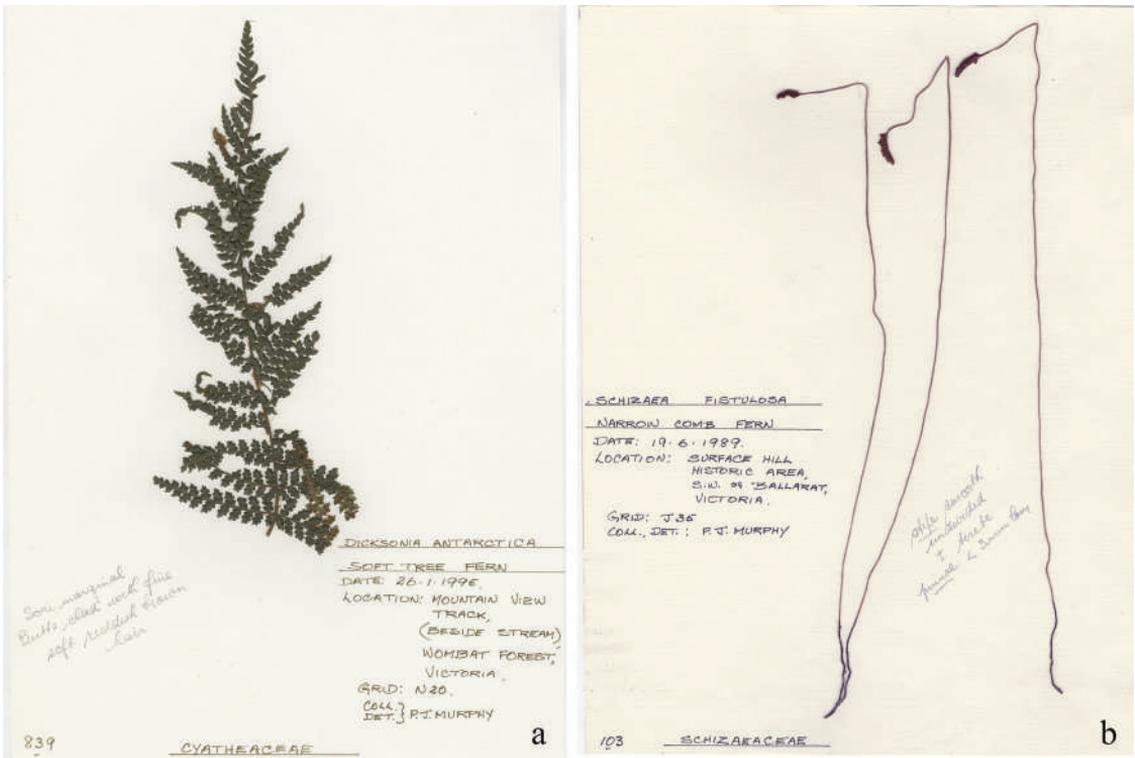


Figure 20. Collections by Pat Murphy **a.** *Dicksonia Antarctica* (Soft Tree-fern) in Wombat Forest on 26 January 1995; **b.** *Schizaea fistulosa* (Narrow Comb-fern) at Surface Hill, Enfield on 19 June 1989

Blechnum fluviatile (R.Br.) E.J.Lower ex Saloman (Ray Water-fern), *Blechnum nudum* (Labill.) Mett. Ex Luerss. (Fishbone Water-fern), *Blechnum wattsi* Tindale (Hard Water-fern), *Cyathea australis* (R.Br.) Domin (Rough Tree-fern), *Dicksonia antarctica* Labill. (Soft Tree-fern), *Histiopteris incisa* (Thunb.) J.Sm. (Bat's Wing Fern), *Hypolepis rugosula* (Ruddy Ground-fern), *Calochlaena dubia* (R.Br.) M.D.Turner & R.A.White (Common Ground-fern), *Polystichum proliferum* (R.Br.) C.Presl (Mother Shield-fern), *Gleichenia microphylla* R.Br. (Scrambling Coral-fern), *Sticherus tener* (R.Br.) Ching (Silky Fan-fern), *Hymenophyllum cupressiforme* Labill. (Common Filmy-fern), *Lindsaea linearis* Sw. (Screw Fern), *Todea barbara* (L.) T.Moore (Austral King-fern), *Tmesipteris obliqua* Chinnock (Long Forkfern), *Schizaea bifida* Willd. (Forked Comb-fern) and *Schizaea fistulosa* Labill. (Narrow Comb-fern). Jim Willis recorded both *Cyathea australis* (Rough Tree-fern) and *Dicksonia antarctica* (Soft Tree-fern) growing in mine shafts near Creswick, but not developing trunks (Willis 1934: 1). Pat found both species growing in Wombat Forest Park near Daylesford on river banks, not in mine shafts, but notes

in the information with the Soft Tree-fern specimen that it has 'Some marginal Butts, clad with fine soft reddish brown hair'. Pat had observed tree ferns growing in mine shafts in Enfield State Park and in 1988 reported to the FNCB that these had been removed. The FNCB wrote to the Department of Conservation, Forests and Lands reporting the matter, which was followed by Pat accompanying the Department's officer Peter Muller to inspect the site (FNCB Minutes 6 May 1988 & 8 July 1988). However, little could be done as the ferns were gone.

In addition, Pat found a colony of Bushy Club Moss (*Lycopodium deuterodensum* Herter) at Surface Hill Historic Mining Area in 1989, which is the first time it was recorded in the Golden Plains Shire (Fig. 21). This colony was re-found by Emily Noble and Bill Murphy and an FNCB excursion was held in May 2016 to see numerous plants growing in a gully amongst the disturbed quartz from the nineteenth-century gold mining era (Fig. 22). A specimen was also collected by FNCB member Roger Thomas at Smythesdale on the Glenelg Highway in 1990. The only other instances of

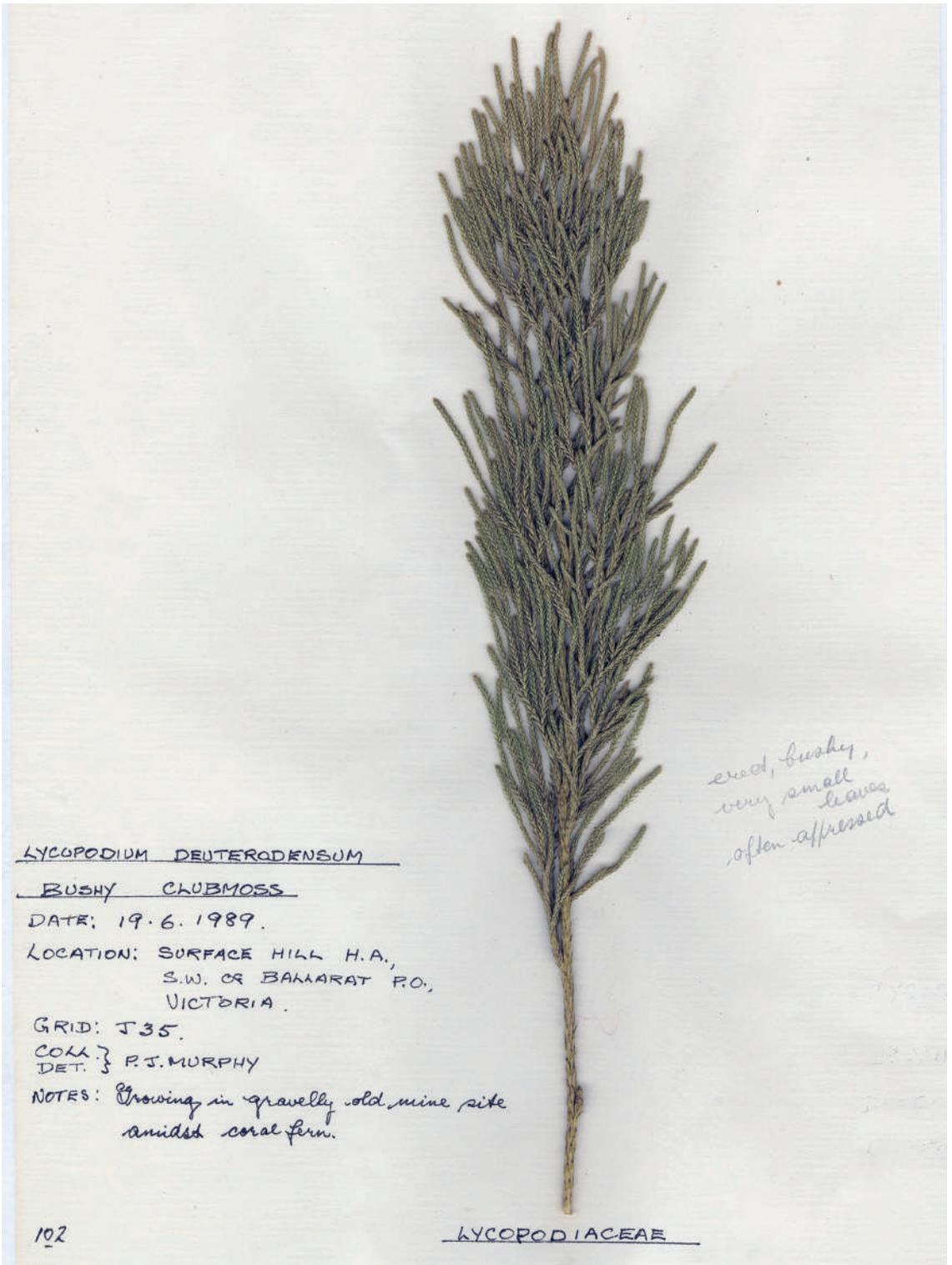


Figure 21. *Lycopodium deuterodensum* (Bushy Club Moss) collected by Pat Murphy at Surface Hill, Enfield on 19 June 1989



Figure 22 a, b. Bushy Club Moss growing at Surface Hill, Enfield in 2016. Photographs Susan Kruss and Emily Noble

Lycopodium deuterodensum near Ballarat recorded on the Australasian Virtual Herbarium (AVH 2017) are a specimen in an old gold mining area near Mt Beckworth in 1986 collected by G.F. Leitch and a group of about 50 plants found by Pat Murphy in 1992 in Wombat State Forest.

In 2016, a special mid-week excursion was held to try to re-discover an area within Enfield Forest that Stella Bedggood called 'the sandy patch'. This area was unusual as the surrounding soil was clay, and the flora there was different from other parts of Enfield Forest and the Ballarat region. Through the efforts of Stella on behalf of the FNCB it was set aside in the 1960s as Berringa Flora and Fauna Reserve, but it has since been subsumed into Enfield State Park and with the passing of the older field naturalists, its exact location had been forgotten. With some old maps and descriptions, we set out to find it, and there was considerable joy for some members in re-finding this location.

Pat Murphy is missed at the Field Naturalists' Club of Ballarat. In particular, her wealth of knowledge about plants and her understanding of how they fitted into the local ecology is a great loss to the Club. The Club noted Pat's contribution in its newsletter:

'She added immeasurably to knowledge of local bushland, diligently maintaining plant lists including keeping up to date with name changes and providing education to members and the wider community through leadership of excursions and presentations at meetings. Pat was a keen naturalist and could be relied on to know where there were rare plants and to assist with the preparation of submissions when needed. Pat's special interest was plants but not only the things that are easily seen. She would often name and point out the beauty in small plants' (FNCB Newsletter, Nov. 2006: 3).

Bill Murphy told me that shortly before Pat died she said to him 'The Field Nats Club has been the highlight of my life' (Murphy 2017).

Conclusion

Lack of formal tertiary education for intelligent women in Australia in the first half of the twentieth century left a gap in their lives which was not fulfilled by the domestic role of wife and mother. These women sought something else to exercise their minds, particularly after the end of the Second World War when Australian families were

able to enjoy a higher standard of living and women with school-age children were not totally occupied with the domestic necessities. For Stella Bedggood and Pat Murphy, who had the interest and intelligence and enjoyed the process of discovery and a meticulous attention to detail, this intellectual gap was filled by the study of botany in their local area. Learning was a source of enjoyment as well as satisfaction in knowing that they were adding to knowledge and understanding of the local environment, and also to a wider sphere of botanical knowledge. Field naturalists' clubs provided an ideal environment for women to explore and learn in a way that was socially acceptable and could be fitted in around family life. While this article concentrates on Pat Murphy in particular, it is likely that this applied to other women engaged in botany through their local field naturalists' clubs.

Pat Murphy's contribution to botany included her extensive knowledge of plants of the local area which was used in submissions to council and government relating to land management decisions. Her knowledge was respected by local and Departmental officials, and she was asked to survey the plants along the Ballarat-Skipton Rail Trail and the Ballarat Water Reserves and lead the plantings at Bittern Lagoon. Her plant lists are valued by the FNCB and used by them to confirm historical presence of species. In addition, her collection at MEL will be of value into the future. Being able to see the collection before curation provides a unique perspective on the breadth and extent of Pat's role as a collector, including the significant number of plant families and individual species she collected, and the systematic way her collection is arranged by plant family.

The concept of botanising as shared experience adds another dimension to understanding Pat Murphy as a collector. The joy of sharing the process of discovery with another person, of learning through 'botanical relationships' suggested by Frieda Knobloch, can be applied to both Pat's mentor in botany, Stella Bedggood, and her husband Bill, as well as the broader context of field excursions with the Field Naturalists' Club of Ballarat. Pat Murphy's collection is a significant contribution to botanical knowledge, but a study of her life reveals the human and personal as well as the scientific dimensions of botanical collecting.

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Appendix 1. Specimens held at National Herbarium of Victoria (MEL) collected by members of the Field Naturalists' Club of Ballarat.*

Name	Year of collection	Location where collected	Plant family
Allan Sonsee	1942	Darwin	<i>Gomphrena canescens</i> R.Br. subsp. <i>erythrina</i> J.Palmer
	1944	Springmount near Creswick	<i>Pterostylis rubescens</i> (D.L.Jones) G.N.Backh. formerly <i>Specularantha aurifera</i> D.L. Jones
	1946	Basalt forest block (Kooroocheang)	<i>Philotheca verrucosa</i> (A.Rich) Paul G. Wilson (formerly <i>Eriostemon verrucosa</i>)
	1952	White Hills, Creswick	<i>Corybas diemenicus</i> (Lindl.) Rchb.f.
	1953	Foster, Gippsland	<i>Microtis parviflora</i> R.Br. (2 specimens)
	1953	Long Point, Creswick	<i>Calochilus campestris</i> R.Br.
	1953	Long Point, Creswick	<i>Prasophyllum odoratum</i> R.S.Rogers
	1954	Creswick	<i>Clematis microphylla</i> DC. (first collection of this species in this district)
	1961	Creswick	<i>Borago officinalis</i> L.
	1964	Creswick	<i>Thelymitra flexuosa</i> Endl.
	1964	Hepburn	<i>Drosera macrantha</i> Endl. subsp. <i>macrantha</i>
	1968	Springmount near Creswick	<i>Trametes</i> (fungus)
	Stella Bedgood	1967	Enfield
1973		Enfield	<i>Calochilus robertsonii</i> Benth.
1973		Enfield	<i>Epacris impressa</i> Labill.
1973		Enfield	<i>Acacia provincialis</i> A.Camus
1975		Durham Lead	<i>Pterostylis nutans</i> R.Br.
1976		Talbot	<i>Eutaxia microphylla</i> (R.Br.) C.H.Wright ^ Dewar var. <i>microphylla</i>
Bon Strange	1961	Kingower	<i>Melaleuca wilsonii</i> F.Muell.
	1961	Sago Hill near Enfield	<i>Corybas incurvus</i> D.L.Jones & M.A. Clem.
	1961	Berringa Reserve, Enfield Forest	<i>Caladenia clavigera</i> A.Cunn. ex Lindl.
	1961	Berringa Reserve, Enfield Forest	<i>Prasophyllum odoratum</i> R.S.Rogers
	1962	Little Hard Hills, Enfield Forest	<i>Grevillea bedgoodiana</i> J.H.Willis ex McGill. (2 specimens)
	1962	Little Hard Hills, Enfield Forest	<i>Pultenaea gunnii</i> Benth. subsp. <i>gunnii</i>
	1962	Dunolly	<i>Pterostylis curta</i> R.Br.
	1962	Near Eildon	<i>Pultenaea williamsonii</i> Maiden
	1963	Enfield district	<i>Cryptostylis subulata</i> (Labill.) Rchb.f.
	1963	Enfield district	<i>Spiranthes australis</i> (R.Br.) Lindl.
	1963	Porcupine Ridge, NNE of Daylesford	<i>Pultenaea graveolens</i> Tate
	1963 Feb 20	Misery Creek near Dereel	<i>Acacia verticillata</i> (L.Her.) Willd. subsp. <i>verticillata</i>
	1963 Sept 13	Misery Creek near Rokewood Junction and Dereel	<i>Acacia verticillata</i> (L.Her.) Willd. subsp. <i>verticillata</i>
	1964	Mt Beckworth	<i>Diuris pardina</i> Lindl.
	1964	Mt Beckworth	<i>Diuris palachila</i> R.S.Rogers
	1964	Mt Beckworth	<i>Thelymitra macmillanii</i> F. Muell.
1964	Enfield	<i>Calochilus robertsonii</i> Benth.	
1966	Long Gully, Creswick	<i>Calochilus robertsonii</i> Benth.	
1966	Leigh River east of Mt Mercer	<i>Correa glabra</i> Lindl.	

Name	Year of collection	Location where collected	Plant family
	1977	Grampians	<i>Boronia coerulescens</i> F. Muell. subsp. <i>coerulescens</i>
	1982	Murrindindi, South Eastern Highlands	<i>Pultenaea williamsonii</i> Maiden
Pat Murphy	1983-2005	Mainly around Ballarat but also other parts of Victoria, NSW and SA	1138 specimens from many plant families
Florence Chuk	2014	Enfield	<i>Amanita ananiceps</i> (Berk.) Sacc.
Roger Thomas**	1990		<i>Lycopodium deuterodensum</i> Herter
	1991	Brown Hill, Ballarat	<i>Eucalyptus ? viminalis</i> X <i>yarraensis</i> Maiden & Cambage
	1991	Moorabool	<i>Bracteantha subundulata</i> (Sch.Bip.) Paul G. Wilson
	1991	Golden Plains	<i>Grevillea bedgoodiana</i> J.H.Willis ex McGill. (2 specimens)
	1991	Pyrenees	<i>Daviesia laevis</i> Crisp
	1991	Pyrenees	<i>Xerochrysum palustre</i> (Flann) R.J. Bayer
	1992	Moorabool	<i>Senecio psilocarpus</i> Belcher & Albr. (2 specimens)
	1992	Ararat	<i>Monotoca glauca</i> (Labill.) Druce

*This information is taken from the Australian Virtual Herbarium or from actual specimens viewed at RBG Herbarium. Specimens referred to in other sources but not listed on AVH and not found at the RBG Herbarium have not been included.

** Roger Thomas is listed as additional collector on another 26 specimens.

Appendix 2. Artworks and photographs by Field Naturalists' Club of Ballarat members held at National Herbarium of Victoria (MEL).

Name	Geographic area	Items
Mary White	Anglesea area after leaving Ballarat.	Paintings of plants and marine creatures
Peter Fry		Photographs of flora