

# 15. An Insider's Perspective: Raymond Louis Specht's oral history

Edited and introduced by Margo Daly

*This chapter is based on an oral history interview conducted by Sally K. May and Martin Thomas for the National Library of Australia (NLA ORAL TRC 5662) at Professor Specht's Brisbane home in May 2006. The extracts from this long interview have been updated and amended by Professor Specht, so they do on occasion differ from the original recording.*

## Biographical overview



**Figure 15.1 Studio portrait of Raymond Specht taken prior to commencement of the Arnhem Land Expedition**

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In 1948, at the age of twenty-three, Raymond Specht became the second-youngest member of the American–Australian Scientific Expedition to Arnhem Land. He studied the botany, plant ecology and ethno-botany of Aboriginal communities, later collating this information to become part of the published four-volume report on the Arnhem Land Expedition.

Prior to his selection as an Expedition member, Specht attended Adelaide Teachers' College to train as a science teacher while concurrently completing his Bachelor of Science with Honours at the University of Adelaide. Professor Joseph Garnett Wood, head of the Botany Department and an international leading figure in plant biochemistry, became a mentor for Specht, and challenged his understandings of field-based plant ecology (see McCarthy, this volume).

During the early 1940s, Specht decided to specialise as a plant ecologist. Under the guidance of Professor Wood, he studied the ecologically complex Adelaide Hills region. This work illustrated a systematic and holistic approach to thinking about plant ecology—a characteristic Specht embraced throughout his scientific career, and which became a key feature of his botanical work in Arnhem Land.

Emeritus Professor Specht is regarded as one of Australia's eminent plant ecologists, internationally regarded for his work on heathlands and arid-zone communities in southern Australia and the chaparral lands and arid-zone vegetation in the south-western United States. He received Fulbright, Smith-Mundt and Carnegie grants in 1956, a Royal Society Nuffield Foundation Commonwealth Bursary in 1964 and became a Senior Fulbright Scholar in 1983. In 2000, Specht was named as an IBC Outstanding Intellectual of the Twentieth Century.

Specht has been an active member of scientific committees and published extensively in the areas of plant ecology and conservation. Some of his major publications include *Vegetation of South Australia* (1972), *Conservation Survey of Australia* (1974, 1995), *Heathlands of the World* (1979, 1981), *Mediterranean Ecosystems of the World* (1981, 1988), *Ecological Biogeography of Australia. Volume 1* (1981), and, co-authored with his daughter, Alison Specht, *Australian Plant Communities: Dynamics of structure, growth & biodiversity* (1999, second edition 2002). Specht was Professor of Botany at the University of Queensland from 1966 to 1989.

## Career Formations

Raymond Specht loved flowers as a child. You could say botany was in the blood: his grandfather, who was born in Australia into a German family, had been interested in growing gladiolus since 1900 and, in his retirement, he wrote

six 'erudite articles' for the *British Gladiolus Journal*. Yet at that time Raymond Specht had no desire to be a botanist. From early adolescence he had wanted to be a teacher of maths and physics—the subjects he excelled in at Adelaide High School.

Specht relates that his career trajectory could be defined by being 'pushed' into things and 'pulled' out of others—a career somewhat out of his own control, where 'luck' played a part. His former science teacher, Stan Edmonds, and other educators, including Professor Wood, encouraged him 'to promote biology in the secondary school syllabus' instead of just chemistry and physics; as Specht 'entered the Teachers College they said you're not going to be a physicist mathematician, you're going to be a biologist'. Specht found zoology, with its teaching by rote, 'terribly boring' but was fascinated and challenged by botany under the tutorship of the brilliant Wood.

By 1946, he was spellbound by plant ecology and became one of Wood's six honours students that year. The 'physicist mathematician' had turned botanist.

Wood gave me the most difficult part in South Australia to survey and that was in the Adelaide Hills, ten miles by ten miles [16 km x 16 km] from Green Hill Road south to Cherry Gardens and east to Piccadilly Valley. I had to walk and bicycle up and down all those ridges and record the distribution of the eucalypts and the understorey vegetation. I was interested in the general patterns of the distribution of eucalypts, and, to a lesser extent, the distribution of the heathy sclerophyll and the grassy savannah understoreys. The rainfall gradient from the Adelaide Plain, about 20 inches per annum up to the summit of Mount Lofty, 45 inches per annum, with sunny north-facing aspects and shady south-facing aspects of ridges, gave a fascinating distribution pattern of eucalypt species.

Wood suggested that Specht make a model of this section for the 1946 Australian and New Zealand Association for the Advancement of Science (ANZAAS) Congress, the first science congress after World War II. The model 'was a great success' and remained in the Botany Department's foyer until the mid 1990s. At this stage, Specht was still expecting that he would become a biology teacher—the 'bright young buck' introducing the new subject. While Specht taught secondary school only briefly, he feels his education training gave him a valuable 'way of looking at the world':

In teaching you should have an holistic overview and that was how I was trained. I looked at ecological research in an holistic sort of way, not just what happened to one species of plant or animal; I tried to integrate the various aspects of climate, geology, soils and vegetation in an ecosystem.

It is essential, if you're going to teach a subject or a section of a subject, to know a lot about it. That's the first thing. But you have to be able to see it in reality. I was thrust into ecology, in the field, and I became fascinated with the inter-relationships within the plant community, with its climate and geology, soils and interaction of animals. One must look at ecosystems, which are an integrated complex of environment, plant community and associated animals and decomposers, the fungi and such forth.

The study of ecology in South Australia 'was way ahead of the rest of the world'. The biologist and plant ecologist Robert Langdon Crocker and Professor Wood 'had recently published papers about the dynamics of vegetation in space and time'. An annual survey of the revegetation of overgrazed arid-zone vegetation had begun in Koonamore Vegetation Reserve in 1925 and was continuing in 1946. 'The whole thing as a holistic entity...was being pieced together: one could follow the changes because a group of students went every year to look at the vegetation, to map it and photograph it and see the changes that had occurred over the last fifteen years.' It was within this context that Specht was offered a place on the Arnhem Land Expedition.

Shortly after the ANZAAS conference in Adelaide in August 1946, Charles Mountford returned from the United States with the offer from the *National Geographic* to take an expedition into Arnhem Land in 1947. I was called into the professor's office...Wood always called us by our surname. He was very Australian, a real ocker Australian, but terribly nervous. He was a chain smoker; he would flick the butt of his cigarette into his mouth! Wood said to me, 'Oh, you won't be getting any payment. You'll get your travel and your keep, but you'd better go.' Crocker and Madigan had achieved fame by crossing the Simpson Desert. 'You will become a "legend" by being on such a fantastic expedition.'

Mountford wanted a botanical collector, an ecologist that was able to think about Aboriginal ecology. He'd been exploring and photographing the art of Aborigines in Central Australia many times, working out from Alice Springs. During the 1930s, he had led expeditions run by the Board of Anthropological Research at the University of Adelaide. Mountford indicated to me that he wanted to see how the Aborigines fitted in with the environment, plant communities and soils and climate, et cetera. How they were able to survive. He didn't express it in that way but that was roughly what he meant, or how I interpreted it. He knew enough about Aboriginal ecology and of the ecological papers of Wood and Crocker to understand the complexity of interrelationships.

Thus, Specht envisaged being part of a team of experts collaboratively putting the big ecological picture of northern Australia together: 'As I would have understood it, we'd be working as a team because at that point in time, in '46, '47, the war was over and Australia really didn't know anything about the North.' These expectations, however, were not fulfilled.

There was no one doing a comprehensive ecological study of Aboriginal life in Northern Australia. To me it was an opportunity that we would have zoologists and archaeologists and anthropologists, and Mountford would be able to see Aborigines in their home landscape, how they worked. Of course, by the time the Expedition occurred in 1948, it had expanded from five to twelve scientists, plus support staff. And Mountford had all those logistics problems that were horrific, but I would have liked us to have all sat down and just had round-table conversations about what we should do, how we integrated, or tried to integrate with each other, but that didn't ever happen.

## Preparing for the Expedition

Specht had 'never seen an Aborigine' and had 'never heard' of Arnhem Land prior to being invited to join the Expedition. In the four months after the initial offer, 'I had to do a lot of sleuthing'. In that time, he wrote an article for the teachers' college annual magazine about the 'Black War' in Arnhem Land. It was 'a crash course to learn about this place and get equipment organised in time for January–February'. 'Certainly I had to get some idea of what equipment would be necessary. I had to get mountains of paper, newspaper, which I got from the *Adelaide Advertiser* in offcuts.' A 'folded broadsheet' was just the right size to fit into the galvanised-steel plant presses that his younger brother, Gordon, an apprentice sheet-metal worker, had made for him.

Plant specimens would be put between the newspaper. A set of plant specimens in newspaper would be placed between two grids either side and strapped up with a belt. The newspapers had to be changed daily until the specimens were dry.

And by the time I'd got everything ready for the Expedition and I'd passed my Honours year in plant ecology as well as several education subjects, I was informed that the Expedition was to be delayed for a year because American scientists from the Smithsonian had to go down and survey Bikini Atoll before the hydrogen bomb was exploded. So everything went into chaos and I went back to teaching.

After three months, Specht was 'pulled out' of teaching when an offer came for him to join the Waite Agricultural Research Institute. The delayed start of the Arnhem Land Expedition gave him 'far more experience and it gave me many contacts with the most brilliant men in Australia in the environmental field'. Professor James Prescott, Director of the Waite, and also joint Director of the Soils Division of the CSIRO (then CSIR) in the same building, 'was a climatologist of note' who had been researching 'the possibility of agriculture in northern Australia'.

I worked at the Waite Institute in January 1948 and made an ecological survey of the Bordertown–Keith area during that period, and then, in February 1948, I joined Mountford coming up here [to Brisbane].

I was going to be honorary scientist on the Expedition in 1947 but by 1948 they agreed to pay me. Mountford got me employment, money, from the Department of Information and they allowed me to come up to Brisbane for a week, two weeks, beforehand. I visited the Queensland Herbarium, which had experience in New Guinea and Queensland of course, and Stan Blake had been into the Darwin–Katherine area on the CSIRO Land Systems Survey in 1946. So I was able to get a lot of know-how.

World War II was over and Australia was very interested in developing the north agriculturally. In 1946, 'the CSIRO Division of Plant Industry in Canberra appointed C. S. Christian at Gatton Agricultural College in Queensland to develop the land system survey of northern Australia and eventually Papua New Guinea'. The concept was to look at the land holistically. Employed in the field were a geologist, a geomorphologist, a soil scientist and a plant ecologist, while a soil chemist and climatologist worked in a laboratory. 'They had aerial photographs. They surveyed the Darwin–Katherine area, that included the Kakadu area, west of Arnhem Land.'

Through his contacts, Mountford was able to obtain oblique aerial photo-mosaics of Arnhem Land. These photo-mosaics, which Specht studied before the Expedition, were to prove very useful for Specht's collecting in Arnhem Land.

I knew roughly what Arnhem Land was like before the Expedition in 1948. That was lucky because if the Expedition had gone out in '47, that wouldn't have been achieved. I had a good background at least and when we flew over Arnhem Land in the Catalina I could see roughly the whole place unfolding.

I was saying, 'Yes, I want to go to this mangrove stand or this sand dune stand, this swamp, this eucalypt forest or outcrop of granite.' I knew where I'd get diversity in plants.

## The Americans

I was fortunate to come up to Brisbane with Mountford just before the Americans, two of them arrived—[ornithologist] Bert Deignan and [archaeologist and deputy leader] Frank Setzler. We went down to the Brisbane River where most of the ships came in. There were these people looking down at Mountford and myself and they said, 'Who's that little fellow down there? He must be Mountford's son.' I was 23. So that was my first introduction to the American side of the trip.

Specht 'didn't know quite what to think' of these two American scientists from the Smithsonian.

I knew they were pretty senior and important. They weren't big-noting themselves but Frank was a bit...I suppose you'd use the word 'ocker' American. He was one of those people that would enjoy singing around the piano at alumni reunions. He loved community activities, jovial banter. He brought out his horseshoes and he hoped that because there would be plenty of time in the day, especially for an archaeologist, he was going to have us all play tossing horseshoes. Which would have been a good thing if we had had time...

Bert Deignan had spent a couple of years in Thailand. He was an authority on the birds of Thailand and he was a very quiet, shy man, but a very educated man. He was an erudite man, an ornithologist. He would tell us all about the archer fish in the big river going through Bangkok. He'd be sitting there having a cigarette, a cocktail out on the balcony and the archer fish would shoot the cigarette out. It was fascinating.

We went down to Sydney, where mammalogist Dave Johnson and ichthyologist Bob Miller flew in from the United States. We must have been invited to New South Wales Government House. We flew to Canberra and we were adding more to the group. We went to see [Arthur] Calwell, who was the Minister with the Department of Information. Calwell was 'rough' in speech, but I wasn't in a position to make any value judgment of him. Mountford wanted him to come to the 25th Reunion [of the Expedition] because he obviously did a tremendous amount. He overrode Murphy, the Director of the Department of Information, when things went wrong because the Australian-American friendship was much

more important than whether we overdid the budget. Then we went out to see Governor-General William McKell where we were ushered into the reception room. Apparently Frank Setzler got around to saying he'd heard about Cascade beer from Tasmania so the Governor sent a couple of bottles to Frank at the Canberra Hotel. I thought Menzies was going to add to it. We were staying at the Canberra Hotel and Robert Menzies was at the next table. He came across and I think he gave us some wine.

Specht remembers the functions as 'meet and greet' affairs. He was not singled out to be spoken to by the powerbrokers: 'I mean not to me, I was just a pipsqueak, [a] chicken.' He can remember little else from this time in Canberra, except the 'wonderful' sight of a platypus in the Molonglo River.

Then we went down to Melbourne. We had a reception in that hotel opposite the Victorian Parliament House. But we also went to one in Government House and all these guests didn't know where Arnhem Land was. They thought we were going down to the Antarctic. A little embarrassing. I think the elite of Melbourne had no idea. No one knew where Arnhem Land was in those days, it was up the north somewhere. Dave Johnson had arrived because there's a photograph of Dave and myself with the curator of mammals of the Melbourne Museum.

The 'fish man', Bob Miller, whom Specht describes as 'a very friendly sort of soul', had also arrived (see Miller and Cashner, this volume). 'And then a number of us, including Bob Miller, went out to Sherbrook Forest to see the lyre birds with the Field Nats. So that was my first time to see a lyre bird.'

Specht describes Howell Walker, the *National Geographic* reporter and photographer, as a 'lovely man, a Princeton graduate in philosophy or something like that. All the Americans had high degrees and they'd had long careers behind them from the American side' (see Jenkins, this volume).

Howell was up in Darwin, broke his arm or something, the day before the Japanese bombed Darwin, and he was evacuated down to Katherine and eventually back to Sydney. I don't know whether he had married his Australian girlfriend then. Subsequently, of course, he joined the photogrammetric service and flew over the Coral Sea. The photogrammetric unit was located in the foundation building of the University of Queensland where the Coral Sea Battle was planned—the turning point of the war. He wrote an article on the Top End for the *National Geographic* and then on the Coral Sea Battle. So probably Howell was twisting the arm of the *National Geographic* and saying get up to Arnhem Land, study these rock paintings and such forth...I think he was.



**Figure 15.2 Raymond Specht (left) and Expedition mammalogist, David Johnson (right), with an unidentified official at the National Museum of Victoria (now Museum Victoria), 1948**

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## Mountford

In Adelaide, 'people like Mountford and Tindale were kind of legends around the place'. Of Mountford, Specht 'knew about the films that he'd taken in the Centre. *Brown Men and Red Sand*, there were a couple of films. I didn't know much more about him than that.'

Getting to know Mountford later as a person, Specht admits that he was 'a difficult man':

Mountford was not communicative as a leader. I was hoping, as an ecologist, [to know] what everyone else was planning to do. We could sit around the table and you'd get enough information on what people were trying to do, or aiming to do. So he was somewhat reticent. But he was a very kindly soul. He was to me, anyhow. He looked after me, and Mrs Mountford did the same. I was almost their child. When we got married he presented us with a couple of photographs. One of them of Uluru and one of the roosting tree at Oenpelli [now Gunbalanya].

Specht was unsure 'what may have gone on behind the scenes', but it was clear that 'everyone had their own agenda'.

[I]n my case, if there was a catastrophe like there was with supplies, I could just go out and collect plants. Each of the plant communities would have at least fifty species. So to collect fifty plants in sets of ten kept me pretty busy. At Yirrkala, the Aborigines started burning the grasslands, which was characteristic, and Bert [Deignan] would have to go out beyond the burnt area and the birds were getting fewer and fewer. So it was frustrating. The fish man [Miller] would have to go and find a reef or something or a stream to put out his fish poison and collect, or have people to help him put them into pickle.

Mountford was aloof. Organising, organising everything. The logistics of getting all these people to do their things, and by the time you got to archaeology and searching for cave paintings, or going to a special tribal ceremony, which they did at Lake Hubert, south of Umbakumba, they'd have to be organised with the Aborigines and with other individuals to get down there. I didn't have a clue what was going on, you see.

We knew that they were having problems. I think Mountford was the leader 'God', as it were. Those problems were his problems. He did have a transport officer [Keith Cordon], he did have a cook [John Bray], he did have advisors like [Gordon] Sweeney and [Bill] Harney and eventually Mrs Mountford. We knew there were problems but we

didn't help him in the solution. Then of course they had the problems with the Department of Information saying, 'You're overstepping the mark with the Department of Civil Aviation, with the Navy'—all this. Then the army got in on the act. I don't know how he ever managed to pull puppet strings with all the things that were going wrong. You can criticise Mountford but he managed in spite of that to get these series of bark paintings done. And Fred Gray [at Umbakumba settlement] of course was a tremendous help in the logistics.

Specht points out that the eminent professor of anthropology A. P. Elkin looked down on Mountford:

He was not a university man and in those days there were people in Britain that if you'd worked like Mountford, you didn't have to go to the university. You got an MA. This was not considered an honorary MA but a real MA. But Australia was terribly rigid in its university system. If you didn't have a degree and didn't have overseas experience to get a PhD from Britain, you were really not regarded. Unfortunately, Elkin was a clergyman but he didn't have any charity as far as I could see.

## Frederick McCarthy

Specht describes Australian Museum Curator of Anthropology, Frederick McCarthy, as 'a delightful person, a very charming but very friendly soul. Everyone got on well with him. He was very industrious.'

[T]hey wanted to get an anthropologist, because Mountford as leader, although he was interested in art and mythology and symbolism, couldn't deal with anthropology. Setzler was an archaeologist by interest. Fred had been interested in the rock paintings, the rock engravings in the Hawkesbury sandstone area in particular. I don't think he'd seen many Aborigines. But it was an ideal opportunity as either [Norman] Tindale but certainly Elkin would have pushed him. And rightly so. Because he was interested in rock engravings on the Hawkesbury sandstone, he was particularly interested in seeing the paintings that Flinders had recorded in 1803 on Chasm Island and other rock paintings. So he was probably, in some ways, crossing swords with Mountford by his interest.

Specht recalls that McCarthy's interests were indeed wide ranging: 'Fred was able to fit in with all sorts of things. He worked with Setzler on archaeological digs, with Margaret McArthur studying hunter-gatherer techniques of the men, he recorded string figures, about 180, 190 of them at Yirrkala', working with 'a wonderful girl' (see McKenzie, this volume).



**Figure 15.3** The Expedition party dining at Umbakumba on Groote Eylandt. Margaret McArthur (left) and Frederick McCarthy (right) are nearest the camera, 1948

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## The Nutrition Unit: Brian Billington, Kelvin Hodges and Margaret McArthur

Specht formed a special bond with the members of the Nutrition Unit—Brian Billington, Kelvin Hodges and Margaret McArthur: ‘They were all about my age. So we were kind of...a little club.’

[T]hese young people would sit in the middle of the table and someone at the end would call, ‘Pass something...’, such as, ‘pass the jam’; it would come past us and we all had bits before we passed it on. This was repeated when the jam was returned, so we got double feeding...

Brian was [nicknamed] ‘Good Tucker Darwin’ by the Aborigines. He was a little overweight. In fact, he couldn’t wear pyjamas, he had to wear a kind of sarong to go to bed because pyjamas would itch him. Brian had to work on taking medical surveys of all the people in the settlements, and so that kept him pretty busy. And when he got to

Oenpelli, quite a number of the Indigenous people had been taken to the leprosarium in Darwin, so he had a hard job. He'd register people to go and see him and they'd be out in the bush, fearing that they may be sent away to the leprosarium in Darwin. He had virtually to chase them out in the bush to get the full quota; it was impossible. But he was very gentle and tender and a wonderful man to have on the Expedition.

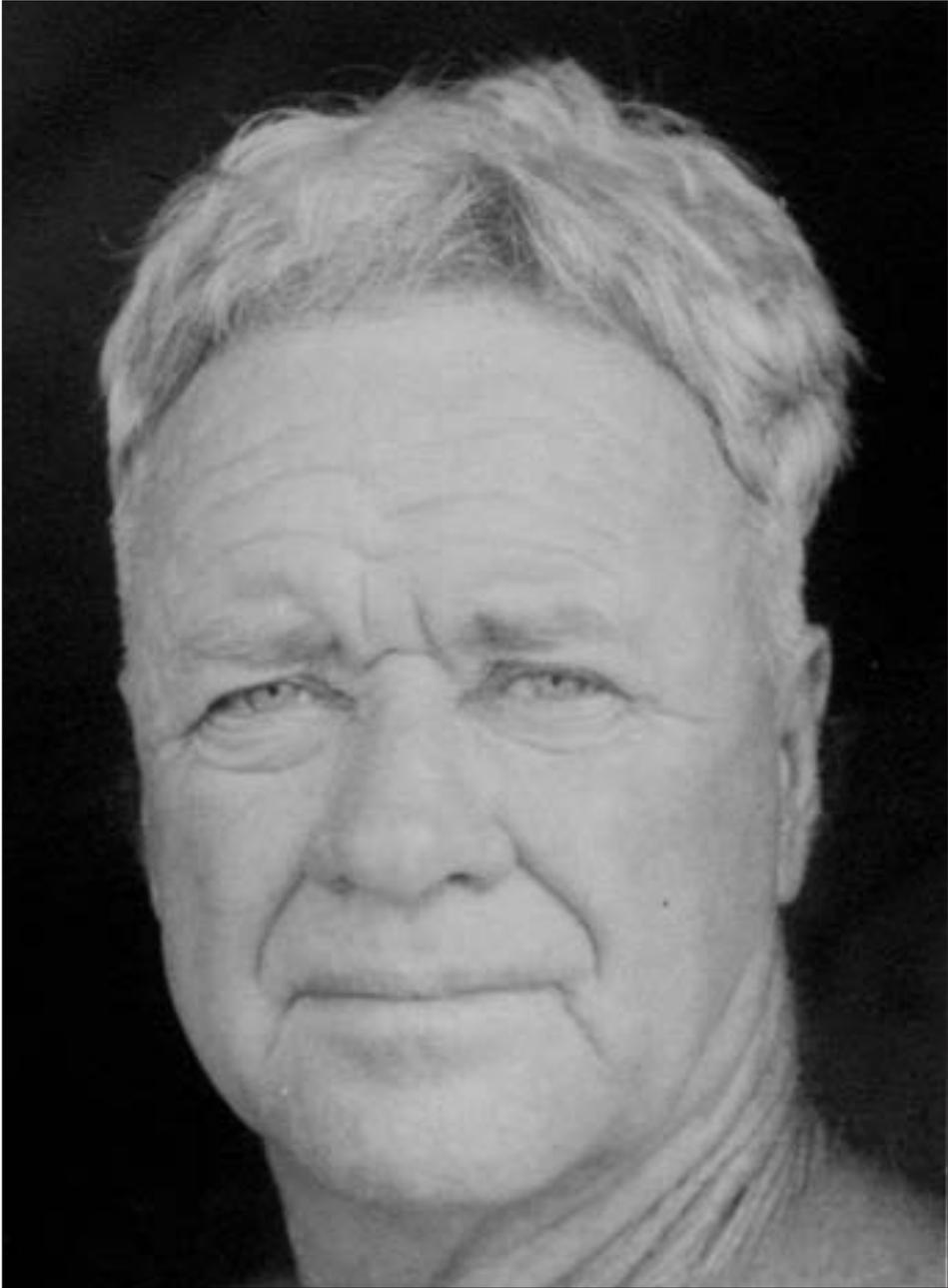
Billington was the doctor for the Expedition members, too, several of whom, including Specht, became sick or were injured in the field and needed his attention.

I got severe conjunctivitis in Groote Eylandt from the flies around the camp. Fred McCarthy got rather weak, tired between Yirrkala and Oenpelli. And Mountford got rather stressed at Oenpelli. His wife was also stressed because of the heat and the humidity that climbed during October before the start of the Wet Season. We were all stressed with that. This was mental rather than physical. Bob Miller got Dengue, breakbone fever, that was pretty grim. It was common. But Brian Billington managed to survive all the hookworms and things like that that the Aborigines suffered. We all survived those things.

Specht praises Margaret McArthur's ability to 'think laterally and integrate':

Margaret was a girl in an all-male camp with Mrs Mountford as chaperone. She was very capable. She'd worked in the Australian Institute of Anatomy. After the war they decided to undertake nutrition studies, which they did initially in a study of pregnant women in the slums of Sydney. And then the team went up to New Guinea and did nutrition studies from the Trobriands, the Sago culture, up to the Highland culture. Margaret was on the New Guinean team...But then in '48 they decided to study the nutrition of the Top End. Margaret was appointed as nutritionist on the Expedition. She had trained as a biochemist in Melbourne and then went into nutrition studies. Margaret studied nutrition in the settlements but she was anxious to study nomadic culture and do time-and-motion studies, which was the first and only time that it was done in Australia. Margaret could look after herself. She was very capable.

## Bill Harney



**Figure 15.4** Portrait of Bill Harney taken during the Arnhem Land Expedition, 1948

Photograph by Charles P. Mountford. By permission of the State Library of South Australia. PRG 1218/17/12.

Specht remembers bushman Bill Harney, who joined the Expedition at Yirrkala, as 'an excellent talker' and collector of Aboriginal songs and lore.

Bill was born in Charters Towers, he was Irish, obviously—Harney. His father died when he was about eight and I think he'd gone to about grade four [in school]. He headed out west cattle droving and that was the first step in Bill Harney's education. Because, every time they'd camp, all the youngsters like Bill would have to make the fire and do a bit of cooking, but they were all expected around the campfire to tell stories or sing. And then when they'd get to a centre like Longreach they'd all head down to the local pub.

Harney had told Specht 'that there were often remittance men in these outlying pubs' who had had Cambridge or Oxford educations, 'but they'd been gamblers, womanisers' who had then been dispatched to Australia 'on a retaining fee to keep them away from Great Britain'. Harney absorbed the talk 'about religion or Malthus or politics':

Eventually he went off to the First War, served on the Somme. He came back and landed in Brisbane with his mate and said, 'I'm not going to be near any cities again.' So he and his mate headed up to Borroloola, where they set up a cattle station. But they didn't have enough cattle, so they borrowed some, as you do. And of course they caught up with them for rustling cattle.

Harney and his friend were 'put into the Borroloola gaol to await the arrival of the magistrate' from Darwin, who only came every six months. Borroloola, as 'the landing point' for tin miners, was 'reasonably large' with a town hall and library.

Anyhow, the white ants got into the Town Hall and they had to shift the library into the gaol where Harney and his mate were able to peruse this large collection. And as well, there was a man called Jose, who was apparently a remittance man, but he had taken up residence in half a tank with an Aboriginal girl. He was exceedingly well educated. He taught Harney a tremendous amount.

Harney and his mate then 'decided they'd go trepaning and that got them out into the Groote Eylandt area, Caledon Bay', where they worked with Aboriginal people 'on the trepaning and so he had a very great first-hand understanding of Aboriginal protocol and culture'. Harney 'became very much part of that landscape. He learnt a lot about Aboriginal behaviour patterns'.

During that time he decided he'd learn a bit about geology and mining. So in the light of the moon he'd be out the back of his trawler studying

for his diploma. He became quite a competent geologist. But then he just knew so much about the Aboriginal culture. He married a half-caste girl who had been brought up in the [Groote Eylandt] mission, she was a stolen generation person. So he kept in great contact with the Aborigines and eventually got to Katherine during the Depression.

It was at this time that Harney's son drowned while trying to save a friend in the Todd River at Alice Springs, and then his wife and daughter died of tuberculosis. 'Bill was then bereft, obviously. He got into working...making the road from Katherine to Victoria River Downs.' He was involved with other Aboriginal women and fathered other children, including Bill Harney junior.

## Collecting and Classifying

Specht was asked to collect plant specimens for ten institutions, including every herbarium in Australia, Kew Gardens in England, Leiden Botanical Garden in the Netherlands (which was then beginning the Flora Malesiana project), the Arnold Arboretum (sponsor of the Archbold expeditions to the Solomon Islands and New Guinea), and the Smithsonian Institution in Washington, DC. 'It was a massive task. I tried to get ten sets of specimens every day in sets of ten.' This was easiest when they were small plants. Larger plants such as pandanus required collecting specific parts of leaf, sucker leaf and the fruit.

At Yirrkala there was a little stand of Pandanus, so there were plenty of sucker leaves, plenty of trees to get samples up above and down below. But there were only six of these big fruits. So I got those and I had to wire them up, tighten them up as they dried out, but there were all these bits from last year's fruits broken up on the ground so I collected those. As far as I could see, they were all *Pandanus spiralis*.

Several years later Harold St John from Hawaii decided to study the Pandanus of the Pacific and he included these specimens from Yirrkala. He found that sucker leaves were different from the tops and that these cones that I had wrapped up, which were the recent ones, were somewhat different in shape from the bits lying on the ground from the previous year. For several decades, I believed that St John had applied the species epithet, *spechtii*, to the old phalanges and sucker leaves of the Pandanus specimens that I had collected at Yirrkala. I liked to boast that I had a 'sucker' name after me.

The process of collecting and classifying was intensive:

You take field notes. You had to record the colour of the flowers, the height. People might never have seen these things before. Now you don't worry about those things, they know enough about them, unless they're exceptional. There were different bark on eucalypt trees, you got samples of that. I had to collect wood samples of the trees for CSIRO Forest Products, who'd done a lot of work in New Guinea and the rain forests of Queensland. So every sample was recorded with the number. They were tagged and placed between sheets of newspaper and, if too large, you try to bend the specimen to fit in the newspaper. A Pandanus leaf, you'll bend up and down. And then you'd press them within newspaper.

During the short time Specht had spent at the Queensland Herbarium, he had developed knowledge of conserving tropical plants. Certain specimens from the mangroves and rainforests with succulent leaves were difficult to dry in the newspaper 'because they take a long time and by that stage the leaves break off from the stems'.

The Queensland Herbarium had experience in north Queensland rain forest and the mangroves and New Guinea and they recommended that I take a four-gallon drum and add formalin and soak those plants in it for 24 hours. So you had this problem of just collecting ten sets of specimens, some of which were very complicated to represent the whole plant, other than the field notes, and then you had to deal with some of them to stop this loss of leaf and flower material.

Under normal circumstances, admittedly, it's quite dry through much of the period of the dry season, but we were there in a cyclone. It still meant that every day I'd have a hundred sheets of specimens and the newspaper in which they were being dried had to be changed every night. You'd have a thousand before the first lot were dry.

The Queensland Herbarium suggested that I get a special tank with a water jacket around it and this would steam up and dry the specimens. So at the last moment, fortunately, my brother was still at the latter stage of his sheet metal apprenticeship, and he was able to construct this drying-oven before I got back to Adelaide from Brisbane, after meeting the rest of the Expedition. This oven was taken in the field and used to dry the pressed specimens. We'd put them into the drying oven and this was stoked up.



Figure 15.5 Specimen of *Melaleuca magnifica* collected by Raymond Specht in June 1948, now in the collection of the US National Herbarium, Smithsonian Institution

By permission of the US National Herbarium, Smithsonian Institution. Sheet No. 02316992.

This meant that Specht had to change the specimens every three or four days, instead of every 10 to 15 days. 'The mountain of material was somewhat controllable.' The drying unit was large: 'the internal size of it would be half of a broadsheet of paper, newspaper, and we'd stack them up and put them on the end so that you got a somewhat upward draft. But it was just a water jacket around the side and I hoped that it wouldn't boil dry and the solder would melt. Which it didn't, thank goodness'.

Specht was not sure whether he would find many surprises in the botany of Arnhem Land:

Initially Robert Brown with Captain Matthew Flinders had been around the coast during January, February of 1803 and they were botanical gentlemen, very avid, expert collectors. So the swamps and coastal stuff and the eucalypt forests were pretty well documented.

Specht did make some botanical discoveries, collecting 'about twenty-odd plant species that were new and a couple of others that have since been found to be new. Others have been modified with time.'

On Bickerton Island I found a water plant called *Nymphoides* related to, not quite, the water lily family; it had floating leaves, but these were in the form of a little wishbone shape so I called it *Nymphoides furculifolia*. I got a couple of other new plants from Bickerton Island.

I didn't get into the sandstone on Groote Eylandt. But I did get a bit of a chance to get, at the foot of the Oenpelli Waterfall, a small tree and that was *Blepharocarya*. The other known species was over in Cape York. I called that tree *Blepharocarya depauperata*—small in stature. I managed to get up to the top of the Waterfall, hardly there for more than a short time; Deignan came with me. We were together for four days, camped out there. Bert was able to get up on top of the sandstone where he found his spinifex bird *Amytornis woodwardi*. He patiently sat between the spinifex clumps and waited for that little bird to jump across.

At the Oenpelli Waterfall I got quite a number of different plants, one of which was a *Pityrodia* but it didn't have enough material. Eventually I contacted Stuart James, Agricultural Advisor to the CMS Missions, and he got some examples. I called it *Pityrodia jamesii*. I collected an *Acacia* that I named after Mrs Mountford who, in the latter stages, came in every night and helped me with changing the newspapers. A good remedial thing for me as well as for her, especially in the steamy weather that was coming up, and Mountford said, 'Would you name a plant after Mrs Mountford?' I named an acacia after Mrs Mountford, *Acacia mountfordae* for the feminine, genitive. I collected a beautiful melaleuca

which had a giant flowering head. I managed to call that *Melaleuca magnifica* which impressed everyone. I did describe a *Cassia* after Bill Harney but this *Cassia* was later shown to be an introduced plant.

## Aboriginal Contact

Specht's first encounter with Aboriginal people was shortly after arriving in Darwin when the party made a short trip to Delissaville (now Belyuen) (see Barwick and Marett, this volume).

We were invited over to the other side of Darwin Harbour to a place called Delissaville. We had a fascinating weekend during which the Aborigines showed us 200-foot, accurate spear throwing. It was the first time I'd seen an Aborigine. I went out and collected with a couple of little boys and they told me the names of plants and so forth, directing me. But that was great fun, with young kids.

The Superintendent of Delissaville, Tom Wake, had a big house. They put on a special dance, secret dance ceremony, which we attended and filmed...But Margaret McArthur was not allowed and of course Bessie Mountford was not allowed either. Margaret certainly was very upset. But that was just one of those things.

Specht talks about how he was 'on the periphery' in terms of working within Aboriginal protocol:

Like the zoologist [Johnson] from the United States...you didn't trespass. I mean I think we were observers. I was a keen observer on ethnobotany, the use of plants. Dave Johnson was particularly concerned with the effect of fire and the hunting of animals. Deignan studied birds, but I don't know how he impacted with Aborigines...Bob Miller, of course, was concerned with fish in the reefs and out in depths where he must have been very conscious of Aboriginal fishing techniques. Dave Johnson was taking pelts and skinning them and getting skeletons sometimes, fighting against Aboriginal dogs, they used to pinch anything, dig under the tents and get everything. On Bickerton Island, we call them 'archaeologist dogs' as they were good at digging holes. I was the closest, of the naturalists, I suppose, with Aborigines, because of my interest in bush tucker and other uses of plants.

Specht wrote a paper on ethno-botany in the Expedition records. This was part of his interest in the cultural meanings of plants to Aboriginal people. 'It was certainly a change of culture because I'd never seen another culture before, other than the heritage of an ocker Australian.'

His introduction to ethno-botany came in his honours year at university:

We had to read books on ethno-botany, the origins of wheat and rice and cotton and things like that throughout the world, just to have some experience of it. I had studied Australian ecology and world ecology—which was Britain and the United States—and a bit of work in Denmark and France, Switzerland. Ethno-botany was part of our experience and I expected that I was going to take notes on how plants were used if I had contacts with the Aborigines. Of course it became much more feasible when the nutrition unit, in particular Margaret McArthur, was out there in the bush.

Along with McArthur, Specht began to take notes on how the plants were being used and eaten. This differed among the various Aboriginal groups:

You would get a plant on the sand dune like *Boerhavia* and Groote Eylandters would say, 'Yes, we dig up the root and eat it.' You'd get to Yirrkala and they'd say, 'What did they do that for? They must have been starving.'

It was fortunate that I had, on Bickerton Island, Kumbiala seconded to me for collecting bark and wood specimens. He was good as an axe man. It was remarkable to have Kumbiala there and he was able to give names of plants.

Specht had learnt the International Phonetic Alphabet at Teachers' College, which helped him record the names of plants told to him by Kumbiala.

But it was just lucky. Fortunately Bill Harney, when we caught up with him in Yirrkala, knew most of them and checked with the Yolngu people and we were able to get a reasonable interpretation of plant names, which stood the test of time.

In fact, it was only a few weeks before working with the bilingual Kumbiala that Specht had met his first non-English-speaking Aboriginal person:

At Groote Eylandt the first time I went out, there was an old man scraping off the bark of the acacia wattle on the coastal dune, *Acacia torulosa*, and I said, 'What are you doing?' He didn't understand me and he pointed up. He had a string of bark, you see, but we just couldn't communicate...In fact, he was making a pubic tassel called *mapina* which was also the name of the tree.

Specht's informant and helper, Kumbiala, a Woodah Island man, had long been employed in trepanning by Fred Gray, superintendent of the Aboriginal settlement at Umbakumba. There were unsubstantiated rumours of Kumbiala's involvement with a murder: 'Kumbiala was put in charge of me and he gave a tremendous amount of help. I was a bit scared because of the murders. We were all a bit scared of that.'



**Figure 15.6 Portrait of Kumbiala, who guided Specht on Groote Eylandt, 1948**

Photograph by Frank M. Setzler. By permission of National Anthropological Archives, Smithsonian Institution. Photo Lot 36, Lantern Slide 40.

I gradually got to know Kumbiala only too well. I had to get wood samples and bark samples. I gave him the axe and I thought, oh gee. Anyhow, during that time, he said, 'Roy', as he called me, they all called me Roy, not Ray, 'I am making you a woomera and when I get back to Umbakumba, I'm going to paint it and give it to you.' That's the totem design for Woodah Island. So I feel that I am part of the Woodah Island tribe or clan. It's the Woodah Island clan that made a sorry ceremony in the Darwin Supreme Court about four years ago I think, or maybe five. They built two totem poles and decorated them. The descendants of the people that had murdered Constable McColl, they came across to the Supreme Court in Darwin and set them up. I gather they're in

the foyer now. And they got the descendants of Constable McColl, who had been murdered accidentally, and they had a sorry ceremony. So it's interesting that Prime Minister Howard can't do it but Woodah Island people, who are my clansmen, can. But technically all those artefacts, we were not allowed to have them ourselves. They were technically Expedition property.

At the Umbakumba settlement, run by Fred Gray and his wife, Marjorie, where the Expedition camped, Specht began to learn about the effects of the recent child endowment system on Aboriginal children and their parents (see Thomas, this volume). Marjorie, a teacher, had come from England in 1946 to marry Fred, who had been her boyfriend prior to his departure for Australia in 1922.

I think it must have been the child endowment; they set up a school that received financial support from the government. The RAAF had left the sea plane base, so there was no other support to give the Grays money; it was a way in which they could get money to maintain the Umbakumba settlement.

When the Department of Civil Aviation sea plane base was established on Little Lagoon, Groote Eylandt, Fred was encouraged to bring his group over from Caledon Bay—and that's how Kumbiala came across—to work with the Indigenous people of Groote Eylandt. Gray built up gardens and orchards to supply the sea plane base.

When Marjorie Gray arrived in 1946 after the war, the Grays built a house, hut and so forth, a school. They had accommodation, 24-hour accommodation for the boys and girls. They had the orchard and garden and there was a wharf.

The point was that the child endowment had come as a federal bonus to all people and if these missions or settlements had children 24 hours a day, five years old and on, in their control, then they got their allowance of child endowment. The mission got it and the Umbakumba settlement got it. They would then have the children [all] day; they would look after them in dormitories. These were Aboriginal children that were technically, quote, 'stolen generation', and the parents would sit around the periphery of the settlement. At the missions, if they went to church on Sunday, they'd get a handout of flour, baccy and tea. So they stayed around.

So I think that the parents were likely to be more involved with the settlement at Umbakumba than they were at the CMS Mission. The CMS Mission on Groote Eylandt had been set up about 1920 and that was for half-castes who were brought in from the mainland. That's where

Bill Harney eventually met his wife, who was half-caste, in the mission settlement. They were just taken away from their parents and brought up 24 hours a day in that settlement. But things had changed by 1948. In 1938, the Arnhem Land Aboriginal Reserve was created. This was really land tenure, Aboriginal land tenure, although the missions and the settlements had control of most Aborigines...It was their land and it was long before Mabo.

When Specht accompanied Margaret McArthur to Hemple Bay and again on Bickerton Island for two weeks in April and May, the child endowment issue threatened her research:

We had a camp of four families. Because of child endowment regulations, we thought that kids five years old and under were allowed to be out with their parents in the camp.

Mrs Gray somehow was interpreting the child endowment legislation and found that these five-year-olds should be back in the settlement. So halfway through the camp, Margaret was starting on her time-and-motion studies, 24 hours a day for six days. Aborigines from the settlement, I think Nangapianga came, and the leader of the group, I thought it was Kumbiala, had spears in their hands, yelling at each other. And Margaret said, 'Ray, you've got to do something'. With my heart in my mouth, I ran down between the feuding pair and tried to ask them what was the problem. Some of them could understand enough, [and they] told me that the five-year-old children had to be taken back to Umbakumba. I said, 'Well, no, you can't'—and wrote a note to Mrs Gray on a piece of toilet paper, the only paper available!

I dismissed the idea of taking the kids away and upsetting Margaret's time-and-motion studies with this family, halfway through the critical part of the work.

Specht, however, felt sympathy for 'poor Marjorie'—obviously in culture shock after just two years in Australia. She was a great fan of the BBC's Desert Island Discs program. 'The song "I'm All So Alone in a Strange Land" would waft over our camp every night.' She 'was very lonely', and the four months the Expedition spent at Umbakumba were 'a wonderful time for her'. He also stresses that Gray attempted to 'achieve happiness, friendliness, amongst the Aboriginal group'.

But eventually the government of the Arnhem Land group, the Federal government, worried about the missions and their impact and of course the Grays' settlement was rather an unusual one with its history. It wasn't religious in any way. Fred knew more about Aboriginal culture and tried

to maintain it, but he realised that the world was changing and that's why he was encouraging, as the Federal government was encouraging, white man's education. So I think he was caught. He had to do it but he wasn't quite sure whether it was the right thing. And of course he'd lost the original tribal inter-relationships.



**Figure 15.7 Raymond Specht having his beard trimmed by a Royal Australian Air Force serviceman at Yirrkala, 1948**

By permission of the State Library of South Australia. PRG 487/1/3.

## After the Expedition

After the Expedition ended in November 1948, Specht's 'mountain of specimens' was packaged up in kerosene crates and shipped from Darwin to Brisbane. 'Mountford, through the Department of Information, got me money for another five months to go up to Brisbane and start identifying these 1300 sets of plants that I'd collected.'

After a short Christmas holiday, I came up to Brisbane to work in the Government Botanist's office and sort out all this material that had been collected, and identify them.

They were all in higgledy piggedly order and I had to spread them out to get them into some sort of order. Fortunately the botanist that had been on the Darwin/Katherine survey for the CSIRO [Stan Blake] was an authority on grasses and sedges so it was a wonderful boon to have him on site. He also was getting interested in the Northern Territory eucalypts and so he took over their identification.

The ferns were sent to Mary Tindale in Sydney, while Noel Lothian of the Adelaide Botanic Gardens 'was an authority on the *Wahlenbergias* or bluebells'. All the rest Specht had to deal with himself:

After sorting and identifying the specimens, you've got to label the specimens. Mountford got special label[s] showing Arnhem Land Expedition, *National Geographic*, et cetera, Smithsonian, and the location with the latitude and longitude. These labels were printed off so, you can imagine, we had to process about 1300 specimens in sets of ten so we had about 13,000–14,000 little labels. Then we had to get someone to type the identification, for example, *Melaleuca magnifica*, with Specht after it, because I was the describer; then the description, whether it was a shrub or a tree, and flower colour, and collecting date.

There were still about twenty or so that didn't have any identification. And eventually those unknown plants had to be described in my dog Latin and I had to get black-and-white illustrations of each.

I had to get all this stuff ready, sort it all out, and get it sent across to herbaria in Brisbane, Sydney, Canberra, Melbourne, to Perth and overseas. The Department of Information took the material to London and to Amsterdam, and the ambassadors presented the material. And similarly to the Smithsonian Institution and the Arnold Arboretum in the United States.

During all this 'slog', Specht met his future wife, Marion Gillies, on an excursion to Fraser Island, when she was a third-year science student with a group visiting from the University of Queensland. She 'changed from marine ecology—she was a fauna ecologist studying mangroves—to study the soil fauna in the Ninety Mile Desert' of South Australia after their marriage in 1952. They settled in Adelaide, where Specht took up a position as research fellow at the University of Adelaide, where he was eventually given a lectureship. Marion continued to do fieldwork while she was pregnant with daughter Alison—'still riding till eight months of pregnancy on the back of my motor bike', says Specht.

After work on Friday, we'd hurtle down to Keith, 150 miles, and out into the desert. And we'd research there from dawn till dusk Saturday and Sunday and then hurtle back Sunday night and start work on Monday morning.

They would later take baby Alison, who herself became an ecologist, out into the field. 'There's a wonderful photograph of Alison in diapers, her first initiation to field work.'

After May 1949, any work on the Arnhem Land project was 'extracurricular', including the mammoth preparation of Volume 3 of the Expedition records, *Botany and Plant Ecology*, which Specht co-edited with Mountford.

Being in Adelaide I saw Mountford every week at least and from my 120 negatives, we were able to print a reasonable set of photographs for illustration, including maps...

Mountford got his Volume 1 [*Art, Myth and Symbolism*] out, I don't know how he ever did it with all the other things he was doing. He had all the material for Volume 2 [*Anthropology and Nutrition*]...but of course because I was going in 1956 to the United States, somehow I jumped the queue. So while we were away, they started processing Volume 3 before Volume 2. It came out in 1958. Because of that delay, the very valuable material that Frank Setzler, Fred McCarthy and the nutrition unit had done didn't come out until 1960, which was twelve years after the Expedition.

Specht ended up editing the fourth volume, *Zoology*, which was published in 1964. It had been held up by the long time it took for William R. Taylor at the Smithsonian—who had taken over Miller's position when he moved to Michigan—to complete the study of fishes (see Miller and Cashner, this volume). 'I was the only Expedition biologist in Australia, on the spot.' Mountford was by that time studying in Cambridge.

Specht felt that the results of the Expedition were to an extent submerged because the Expedition records rapidly became collectors' items and too expensive for scientists to buy. But above all, the 'impact' of the Expedition research was lessened because of the delay in publication.

It was Specht's idea to have the twenty-fifth and fiftieth anniversary Arnhem Land Expedition reunions, which occurred in 1973 and 1998. He also, however, met up with his former Expedition colleagues in the United States. Specht was encouraged 'to go to California and Arizona, etc. and to study mineral nutrition at University of California, Berkeley'. He took up a Fulbright award for this purpose in 1956. While visiting Washington, DC, he met Frank Setzler and Bert Deignan again and attended a National Geographic Society luncheon where the lecture film on the Expedition, shot by Howell Walker, was shown (see Harris, this volume). Some weeks later, he renewed his friendship with Bob Miller at Ann Arbor, Michigan.