

## BARBARA YORK MAIN -

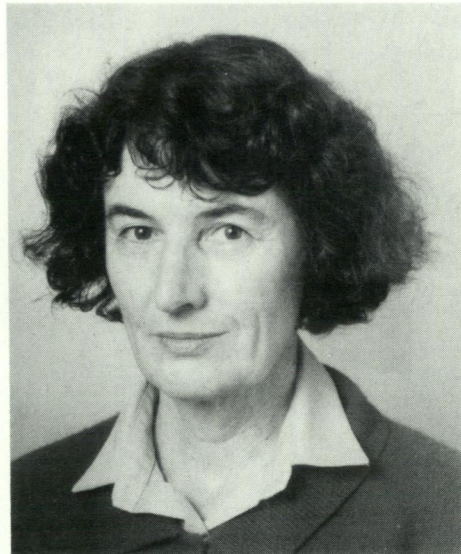
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'Lady of the Spiders' is the title of a television film made by the BBC and ABC Natural History Film Unit in 1980. But the first I was aware of the lady was in 1947 when told that a student in the University Women's College kept spiders in her room, not the sort of activity generally associated with young ladies, even university students. Why and for how long had she had this obsession with spiders? Why had a country girl of the 1940s come to the University to study zoology? Remember it was a time when the University Visitor, the Lieutenant Governor, in his annual speech to the graduation ceremony told women graduands they should stay at home to reproduce and care for their husbands and families.

Born in 1929, Barbara York grew up on the family farm at Tammin then near the outer edge of the Western Australian Wheatbelt where bush and pastoral leases were being supplanted by farms. So perhaps it is not surprising that the interest of an observant farm girl should be taken by 'small things I could get close to', her words, when roaming the bush with her four brothers back in the 1930s. There were insects, frogs, lizards, and spiders to be watched in the scrub near her home and they would have had their place in the letters she wrote to her Correspondence Classes teacher. But it was not until her high school days that spiders became her special interest.

Only ten years earlier her father had cleared the bush, planted the first wheat and built their home, just two mud brick rooms with a galvanised iron roof and a makeshift kitchen. Now, much enlarged, 'Fairfields' is still the comfortable family home of one of Barbara's brothers. Life had been hard but "The early twenties marked a burgeoning period in the farming community, . . . domestic life became more comfortable and many substantial pug brick and stone houses were built to replace some of the makeshift iron and hessian-walled houses". How-



Barbara York Main in 1988, Trustee of the Western Australian Museum.

ever by the late twenties the "economic depression was already beginning to be felt and . . . rabbits had reached destructive proportions. Many farmers were forced to abandon their holdings" (Main 1993b, pp. 46-47) and schools were closed. But the York family pioneered on, they depended largely on their own produce and even got their own wheat ground at the flour mill in Kellerberrin.

#### School

For two years Barbara attended a bush school with her brothers, then studied at home through the Western Australian Education Department Correspondence classes with the help

of her mother who had been a teacher. She had to write a fortnightly letter to the lady teacher she only knew through the encouraging letters she received in return. The teacher early detected her interest in natural history and sent books from the School library. These were augmented by books which her mother had acquired while she was a teacher, such as Gladys Froggat's 'The World of Little Lives', a simple but accurate introduction to Entomology. As for fairy tales, May Gibbs' "gumnut babies were as real as the beetles and lizards we observed and collected" [from a letter to Geoffrey Dutton (Dutton 1984)].

Correspondence education has its disadvantages and Barbara is aware of them but is "sincerely grateful for those early years . . . Without the usual class-room harassments and competitiveness engendered in a group I believe correspondence pupils have the advantage of developing as true individuals". And "certainly, years of working alone as a child develops self reliance and independence" (Dutton 1984). Not inhibited by the structured class room atmosphere she developed her own style of writing, probably influenced by the books her teacher encouraged her to read and the 'classics' on shelves at home and in relatives' households. One book she remembers was a copy of a

children's version of 'Dante's Inferno' with colour pictures, and no doubt it was just such books that stimulated her growing interest in literature. From her late primary years she started to read avidly and continued to read a lot through her high school years.

With the support of her Correspondence teacher, Barbara won a scholarship to Northam High School (one of the few country High schools at that time) and boarded there during term time. She did not share her brothers' interest in sport and at weekends explored the countryside with a bush naturalist, Chris Jessup, and his family. Chris was a railway engine driver who, in those more leisurely days, had time to learn from nature during his journeyings. The holidays were "to return to a wild, lonely, forgotten piece of unwanted 'useless' land no good for farming . . . the sort of place where one finds a kind of earthly anointment" (Main 1971, p. 24).

### University

By the end of the war conditions on the farm had eased greatly, but the transfer from high school to university still cannot have been an easy decision for her parents. However the strong support of several of the teachers and the Education Department guidance officer convinced her mother that she should go. Fortunately the University of WA was still a free university, it charged no tuition fees, or the decision might have been different.

Even before going to high school Barbara had decided she wanted to be a naturalist and a writer, so it is not surprising that on entering university (in 1947) she hoped to enrol for an 'Arts Degree in Science' which would have allowed her to study both Literature and Zoology. But that degree course ceased the year she entered university so she enrolled in Science, majoring in Zoology. Literature could be picked up independently and it is evident from the quality of her writing how successful she was in 'picking it up'.

It was in the Zoology classroom that Barbara met her future husband, A.R. (Bert) Main, starting a personal and a productive professional partnership that is acknowledged in much of her published work. Her 1950 Honours study was of the Entomostraca of four periodic ponds on the Wheatbelt farm. I was her Supervisor and for me, a newcomer from the tropics, it was a learning experience to visit Fairfields and be shown an early morning ice-covered pond, then to be uncomfortably hot by midday. Those ponds are now enshrined in the chapter 'Ephemeral Waters' in 'Between Wodjil and Tor' (Main 1967) where their small inhabitants parade in the author's drawings.

On graduation, with offers of jobs at Queensland and Wellington (New Zealand) universities, Barbara opted to go to Dunedin as an Assistant Lec-

turer at Otago University under Professor Brian Marples, with whose work on spiders she was already familiar. Orb web spiders were abundant and she began to study them for a PhD but in 1952 had to return to WA to get medical treatment and to marry when Bert returned from a Fullbright Fellowship in America.

Back at the University of WA, Barbara was the first female PhD student in the Zoology Department and from 1952-56 she received a University research grant and was encouraged in her studies by the Professor, Harry Waring. Trapdoor spiders had long been her special interest and her PhD Thesis was: 'A comparative study of the evolution



Barbara York Main in 1950, newly graduated with Honours from the University of Western Australia.

of the Araneae as illustrated by the biology of the Aganippini (Mygalomorphae: Ctenizidae)'. She made extensive collections throughout southern WA and South Australia, with detailed field observations wherever she went. There were collecting visits also in Victoria, New South Wales, and south-east Queensland, and in 1954 she spent several months at the Australian Museum, Sydney, studying the collections and examining types, with visits to the National Museum of Victoria and the Queensland Museum.

### Children, collecting, travel, study overseas

Barbara was pregnant with her first child, Rebecca, when she presented herself for award of her doctorate in 1956. The paper based on her thesis was published the following year. Two more chil-

dren, Gilbert and Monica, followed during the next eight busy years until the youngest went to kindergarten. But even with three small children to care for she continued her research at home and somehow made time to write two books, 'Spiders of Australia' and 'Between Wodjil and Tor', the chapter 'Chelicerata' for the new edition of Parker and Haswell's Textbook of Zoology, and to publish papers based on her field studies and collections. Bert was studying frogs and together, taking the children with them, they continued to collect widely in the Goldfields and Wheatbelt in addition to several 'trips' across the Nullarbor and in South Australia and Victoria. She still had access to the Zoology Department facilities sharing cramped accommodation with her husband and her growing collection, but with limited financial support and no status on staff. Was it still the image of married women as homekeepers?

Many of the early types of Australian spiders, crucial to an understanding of their taxonomy, were deposited in British and European museums. The International Federation of University Women awarded Barbara an Alice Hamilton Fellowship in 1958 which enabled her to spend six months at the British Museum (Natural History), now The Natural History Museum, in London and the Hope Museum (Oxford) examining their type collections of spiders and other collections on loan from several European museums. It was not until after this time that the BM(NH) relaxed their procedures and permitted the loan of types, even of Australian material to Australian taxonomists. During the same year and before her visit to Britain, Barbara accompanied Bert while on a Carnegie Travelling Fellowship in America. During this time she was able to engage in field work in California, Arizona and Texas and to study collections in the American Museum of Natural History (New York), the Smithsonian Institution (Washington D.C.) and the Museum of Comparative Zoology (Harvard), where she came to know leading arachnologists such as Willis Gertsch (AMNH) and Herb Levi (Harvard). Much later in 1979 she studied Eugene Simon's vast nineteenth century collections at the Paris Museum. When attending overseas conferences Barbara has always taken the opportunity to

visit European museums including Hamburg and Stockholm and revisit the Natural History Museum in London.

The family was in Queensland in 1965 while Bert was on Sabbatical leave and they collected frogs and spiders in the rainforests and inland localities. Barbara was able to obtain much topotypic material of Rainbow and Pulleine's species described in the early part of this century. In Brisbane they shared care of the children so that Barbara could work in the Zoology and Entomology departments at Queensland University. With successive trips throughout southern Australia, including many 'Nullarbor crossings', several visits to Tasmania and the Kimberley, Barbara's collection of mygalomorph spiders has gradually accrued as perhaps the most representative for Australia. She has also worked in the field and collected spiders in Papua New Guinea.

The University of WA Zoology Department continues to be Barbara's main base. She was appointed an Honorary Lecturer in Zoology in 1979 and lectures in the undergraduate courses on arthropods and the principles of taxonomy, and is now a Senior Honorary Research Fellow (Zoology) of the University. However Barbara has another base, her Torbay Natural History Laboratory perched high on Torbay Head overlooking the Southern Ocean. There, among other research, she is studying the social behaviour of a non-web-building spider of the karri/jarra forest canopy. And,

near her old home in the arid Wheatbelt, she is involved in a unique long-term field study of a marked population of *Anidiops villosus* (Rainbow) the females of which may live at least 25 years, a study that has implications for reserve management.

Associated with her studies Barbara has attended International Arachnology Congresses of CIDA (Centre International Documentation de Arachnologie) in England, Spain, Finland and most recently Brisbane for which she was co-editor of the papers for the Scientific Proceedings. She is currently a member of most internationally recognised arachnological societies. She has been a member of the Australian Entomological Society since its foundation and was for many years a



Barbara York Main in Dunedin (1951), recently appointed Assistant Lecturer at Otago University.

member of its Conservation Committee. She has been a member of the Royal Society of Western Australia and the Western Australian Naturalists' Club since her student days and has served as secretary on the latter. She is still the Australian Correspondent for CIDA. She was a member of editorial committees for the Fauna of Australia (including the inaugural planning committee) and the Zoological Catalogue of Australia and was a member of the Australian Biological Resources Study Advisory Committee for six years. Reflecting her contribution to literature, Barbara is also a member of the Australian Society of Authors and the Fellowship of Australian Writers and was Vice President of the WA Branch of FAW in the 1970s.

### Publications

It is not for me to evaluate Barbara's scientific work. I am not an Arachnologist and the long list of her publications about spiders and other arachnids speaks for itself. Similarly the articles in this volume attest to their authors' regard for the high quality of her contribution to knowledge of spiders and their place in the Australian environment. What I hope to do here is to help you to an appreciation of the person behind all those scientific publications and introduce readers to the much wider range of interests of someone who is pre-eminently a naturalist. Indeed you will probably learn more about our author by reading her books than I can hope to tell you, and if you have any love of our sunburnt land you cannot fail to feel it creep into your soul from the obvious delight in it that 'Between Wodjil and Tor' and 'Twice Trodden Ground' convey. More about them later.

Scattered through the publication list there are essentially taxonomic papers and monographs with descriptions of species of spiders, principally of Mygalomorphae. However the approach is always that of a naturalist and field observations add an important dimension to the descriptions, as do her own precise figures. Progressively more papers are about the biology and ecology of Australian spiders, their biogeography and evolution, as for example the three comprehensive chapters in Keast's 'Biogeography and Ecology of Australia' (Keast 1981). Trapdoor and funnel-web spiders have always been Barbara's special interest and their morphological and behavioural adaptations and strategies for survival in arid environments are the subject of a chapter in another book (Barker and Greenslade 1982), and are the theme of later papers. So too, many recent papers are concerned less specifically with spiders and more with nature conservation and the survival of relict areas of natural bush threatened with "man's ever-coveting encroachment" (Main 1971, p. 28). Several explore the theme of trapdoor spiders as monitors of habitat (Main 1987a, 1987b). But it is just because of her

intimate knowledge of ecosystems inhabited by spiders that she argues the conservation ethic so cogently.

Lastly, three papers must be noted which further explore the theme of landscape conservation. One, 'Living in a fabricated landscape the look of the land' (Main 1993a), is the material of a talk to a Workshop of dryland farmers at Tammin in the course of which she stresses the role of women in pioneering the Wheatbelt. 'Social history and impact on landscape' (Main 1993b) is a history of Barbara's home territory, facts behind the stories in 'Twice Trodden Ground' and illustrated with photographs taken on the York family farm and



Barbara York Main and Bert Main, on the completion of their Ph.D's in 1956.

environs in its early days. 'Restoration of biological scenarios: the role of museum collections' (Main 1990) presses the function of museum collections as "a guide for restoration of degraded or changed landscapes" and in this context states further that "In the near future those drums, jars and cabinets in museums and herbaria will be the only material evidence of a once rich habitat in south-western Australia".

In addition Barbara has published essays and stories with the theme of landscape and human involvement in the literary journal "Westerly". She has received several literary prizes for her publications.

### The Books

Barbara has published four books and co-edited another, a literary volume (Choate and Main 1979).

Two of her own are specifically about spiders, and trapdoor spiders and their burrows invade the other two which are natural histories of the Wheatbelt landscape and the impact of the men and women who pioneered the land. They display Barbara's intimate knowledge of the Wheatbelt ecosystems and her passionate concern for the conservation of remnant ecosystems there and elsewhere.

'Spiders of Australia'. Earlier this century H.R. Hogg in Victoria and England, W.J. Rainbow at the Australian Museum, and V.V. Hickman at the University of Tasmania had all published on Australian spiders but only in professional journals. Apart from a primer by Rainbow and a narrative book by McKeown and later a guide to Tasmanian spiders by Hickman there were no "popular" books on Australian spiders, and there was no way naturalists could identify the spiders they found. This little handbook of Barbara's, it really is a hand book, is a get-to-know the natural history of spiders, with descriptions of representative species of the families. The 'Guide to families' is a key to the webs, snares and hunting habits of spiders, not to morphology.

'Spiders' is a scientific natural history in the tradition of the British Collins New Naturalist Library. Sadly, the Australian offspring of the series (the Australian Naturalist Library) only runs to five volumes. The book is a personal account, often Barbara's own observations, written in her individual style and with a minimum of technical terms, making it intrinsically easy to read. Its only resemblance to a textbook is the scientific accuracy of the text. The simple line drawings of webs and nests convey the skill of the spider artisans and drawings of the spiders themselves are no science illustrator's abstractions but the work of an artist, without sacrifice of accuracy. The book was awarded the inaugural prestigious C.J. Dennis Prize.

'Between Wodjil and Tor' is a classic natural history of the Western Australian Wheatbelt, the responses of one who has lived in and loved every facet of the countryside in which she grew up. "The recurrent theme of the book is the annual rhythm the changes wrought by the seasonal cycle within a particular landscape, its dominant plants and a selected group of animals" (Main 1967, Preface). But there are numerous digressions; in the Chapter 'The lay of the land' to geology and often, as in 'The fugitives', to the retreat of the fauna in face of the changing environment. The book is illustrated throughout with Barbara's simple line drawings of the landscapes, plants and animals she talks about.

'Twice Trodden Ground' is also a natural history of the Wheatbelt, though more a social natural history. It is the same ground as Between Wodjil and

Tor, but the essays are about the imprint of 'the second tread', of European intruders, on a landscape which had only known the soft 'first tread' of their Aboriginal predecessors. They are stories of Barbara's childhood experiences of the country she knew so well, now seen with the perceptive eyes of an adult of "the second-born generation . . . which unashamedly admits its identity with the landscape" (Main 1971, p. 93). It too is illustrated with pen and ink sketches of the countryside and relics of settlement, of surviving chimneys, a well surmounted by a derrick of logs and a winch, a farm wagon abandoned by the roadside, stooked hay. One story sadly recounts the sale of the farm horses and, perhaps it was her Father's reflecting, that "with the tractor would come a sudden gulf between man and nature; the land would become a thing for exploitation even abuse? The identification of man with his land would be gone, for by using a machine a man works it, not with it" (Main 1971, p. 72).

That 'Twice Trodden Ground' has a much wider appeal is evident from it having been read in whole on the University of Adelaide Radio and parts on University of Western Australia radio and 6RTR Public Radio. Likewise it is not surprising that 'Between Wodjil and Tor' has been required reading for students of Agriculture in the Wheatbelt. Copies of the two books were presented to overseas ecologists who attended a conference on 'The Reconstruction of Fragmented Ecosystems', held at Tammin in 1991; this was to focus their attention on the wide background of understanding essential to planning conservation programs. While not a book, the film 'Lady of the Spiders' which profiled one of Barbara's trapdoor spider field studies must have reached a wide audience. Made in 1980 in the WA Wheatbelt by the BBC and ABC Natural History Film Unit, it was shown throughout Australia and is still reaching viewers around the world.

Barbara was the first woman to be appointed a Trustee of the Western Australian Museum on which she served from 1982 to 1993 and still chairs the Perth Museum Board of the reconstituted Trust. Both in this capacity and for much longer as an Honorary Research Associate she has made a valuable contribution to ensuring the high scientific standing of the Museum. This volume is published in acknowledgement of her contribution both to the Museum as a Trustee and to the science of Arachnology. It certainly does not mark the end of her professional career. As recently as 1988 Barbara and Bert collected in the previously little known Kimberley rainforest and there is a photo of them in her paper on the prolific spider fauna she found there (Main 1991). Though the direction of Barbara's interests may change I am certain she will continue her research on spiders and will

speak and write on other interests related to her love and understanding of our land and the need for its conservation.

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