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OBITUARY

Archibald John McArthur, OAM (1922–2016)

Photo: John Goldberg

Archibald John McArthur was a member of the RSSA for 52 years and in this period he was Minute Secretary 1992–1996, Membership Secretary 1997–2008 and a Councillor 2008–2012.

Archie was born in 1922 at Millicent. He was a capable student and won a scholarship to Scotch College then another to St Mark's College. At school and university he had an interest in photography and made pocket money developing other students' negatives. He later took this skill to a sophisticated level of micro photography, allowing him to film ants from all angles under flash. This was an early step towards fulfilling his life's crowning achievement; a unique tool to identify ants that previously had not been known.

He graduated from the University of Adelaide in 1948 with a bachelor's degree in electrical engineering. His study had been interrupted by World War II where he was made a sub-lieutenant at the age of 20 in the Royal Australian Navy. He worked on the radar repair ship "HMAS Jon Jim" along the north coast of West Papua servicing faults in naval ships. Archie, ever observant, remembered an indigene pointing out a distant Aldis lamp at night saying, "light he talk."

In 1950 he married Meg Stuckey, a granddaughter of the early pioneer, Samuel Joseph Stuckey. Archie, having had his life and education interrupted by war, returned to civilian life with a great fervour to actively participate in his community. He quickly became involved in the Millicent Hospital, local National Park organisations, the Field Naturalists, National Trust and Fire Fighting organisations. On a state level he was on a number of Boards including Advisory Board of Agriculture, Bushfire Research Committee, Fauna Consultative Committee and Presbyterian Girls College (now Seymour College). Right up until he was diagnosed with an inoperable brain tumour, Archie was a very active member of the Royal Society of South Australia and the SA Museum Waterhouse Club.

Supplemental data for this article can be accessed here.

After 40 years of farming Archie moved to Adelaide as his wife had health issues. Archie commenced as a volunteer in the entomology section of the South Australian Museum in 1990 and was made an Honorary Research Associate in 1994. In 2002, his contributions were recognised with an OAM.

Archie's outstanding legacy to the world's knowledge is his publications that summarise his discoveries regarding the diversity of *Camponotus* ants, one of the most ecologically significant ant groups. His publications, published nationally and internationally, enable interested specialists and non-specialists alike to identify species, the essential first step in understanding their biology and ecology. He collaborated with numerous colleagues during his studies, including PJM Greenslade and RW Taylor, and co-authored papers with M Adams, P Klimes, R Leys, LR Miller, SO Shattuck and J Weyland. The greatest living entomologist, Edward Wilson, Harvard University, applauded Archie's last book as a "very significant addition to systemic literature." Archie's ants formed the solid core of his loveable eccentricity.

How did all this ant business start? In 1948, Archie inherited a farm devastated by rabbits and the top soil blown away. He fenced off an area and single-mindedly destroyed the rabbits. One species of ant came back when almost nothing else was left, followed by natural vegetation. He could find no books to help him and when he asked local authorities about this ant, nobody knew anything. He finally got his answer from CSIRO in Canberra – the hard-working ant species responsible for the revegetation of Archie's barren paddock was *Camponotus terebrans*. That such a great achiever as this ant was so little known seemed wrong to Archie, and his response was to throw himself into finding out as much as he could about this ant and its relatives. Aside from discovering previously unknown levels of diversity within the genus *Camponotus*, he also published a paper showing how the ant that first attracted his attention, *C. terebrans*, contributed to revegetation of bare sand by distributing the seeds of acacias across the landscape.

Archie was a self taught and skilled taxonomist, specialising in two closely related genera of ants, *Camponotus* and *Colobopsis*, that occur in many parts of the world. A taxonomist has to master the anatomy, physiology, behaviour and biogeography of the chosen animal group in fine detail both published and unpublished. In addition, the taxonomist has an important responsibility to publish guides and identification keys that enable others to use the new species discoveries. Most biologists learn the science of taxonomy as students, so it is a tribute to Archie's native ability and hard work that he successfully acquired this knowledge after a lifetime of work and experience in areas quite unrelated to the technicalities of insect taxonomy.

His research took him overseas numerous times to visit the great ant collections of the world, which are located in some of the world's greatest cities. His last great gift to the world and the next generation of ant taxonomists was to gather all the 100 or so *Camponotus* ant varieties that still remained unnamed and put them on the web, complete with photographs, measurements and grouped together by morphological characters. He thereby ensured that a successor could pick up where he left off, but with a far better level of understanding than that which had confronted Archie when he began his own studies.

He passed away on 28 August 2016 and is survived by two daughters, three grandchildren and three great grandchildren.

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(with thanks to Oliver Mayo, Steve Shattuck and Mark Hutchinson for their input)
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