

Vale Phillip Elliot Playford

a life of geology, exploration and history

27 December 1931 – 12 July 2017

Phillip (Phil) Elliott Playford was born on 27 December 1931 in Guildford, the elder son of Elliott Geoffrey and Alice Mary Playford. He attended the Forrest Street State School (now South Perth Primary School) (1937–42) and completed his schooling at Perth Modern School (PMS) (1943–48). He later wrote that he ‘didn’t like the school (PMS) and that his ‘salvation came through tennis, in which I eventually became school champion and captain of the winning team in the inter-school competition’. He won a General Exhibition in the Leaving Certificate exam and went on to study geology at the University of Western Australia (1948–53). His honours project was mapping the Jurassic geology of the Geraldton district. Travelling to and from the field area on his motorbike (a Triumph 3T) he collected a large number of ammonites from the Newmarracarra Limestone which he sent to W J Arkell at Oxford University, who was the world-renowned expert on Jurassic rocks. This led to his first major publication (with Arkell, in the *Philosophical Transactions of the Royal Society of London*) that established the Bajocian age for this unit.

After graduating, Phil joined the Bureau of Mineral Resources (BMR) in 1953, working in Alan Condon’s team with two other stalwarts of WA geology, Murray Johnstone and Daryl Johnstone, mapping the southern Carnarvon Basin. In 1953 WAPET (West Australian Petroleum Pty Ltd) discovered oil at Rough Range, and lured Phil, among others, away from the BMR. In those days oil exploration in Western Australia involved a lot of detailed geological mapping, and Phil has always emphasised the importance of such field work in understanding the geology of a region. This work culminated in McWhae et al’s (1958) extended paper which laid the foundations of our modern understanding of the stratigraphy of the major sedimentary basins of the State.

Phil’s time with WAPET took him to the Carnarvon and Canning Basins and had four important impacts on his subsequent career. The first was discovering stromatolites at Hamelin Pool in July 1954 when he and Daryl Johnstone were working in the Shark Bay area. This led to his lifelong interest in stromatolites and the geology of the Shark Bay area. The second was meeting stockman Tom Pepper at Tamala station, also in July 1954, who showed him various items that he said came from a shipwreck at the foot of the coastal cliffs south of Tamala. Thus began Phil’s involvement with what he eventually deduced was the wreck of the Zuytdorp. Thirdly, in 1956 he was introduced to the Devonian reef complexes, which started a life-long love affair with these superbly exposed rocks. The Aboriginal cave paintings in these Devonian limestones also fascinated Phil, resulting in his research into the mythological significance of the paintings and the mapping of tribal boundaries.



Arising from this interest, in 1964 Phil joined an expedition to the Gibson and Great Sandy Deserts, which successfully located the last known Aborigines who had never before seen Europeans, living almost untouched by the outside world. Phil at times recounted the tale of how, although they had never met Europeans, they knew of “puddy tats”, through contacts with other Aborigines.

Phil was awarded a Fulbright Scholarship in 1959 which took him to Stanford University where he obtained a PhD for his thesis on the geology of the Egan Range, near Lund, eastern Nevada. He completed the project in two years and decided to return to Australia. Not long after his return to Perth he met Cynthia Hogbin, with whom he shared a keen interest in the bush; Phil with the rocks, Cynthia with the plants. They married in 1964 and had two daughters, Julia and Katherine.

While WAPET was keen to re-hire Phil, he saw that fieldwork was a lower priority than before, and instead joined the Geological Survey of Western Australia (GSWA, a branch of the Mines Department – now newly renamed the Department of Mines, Industry Regulation and Safety) in 1962, as Supervising Geologist of the newly created Sedimentary (Oil) Division, which had responsibility for mapping the Phanerozoic basins of the State and assessing their fossil fuel resources. He worked for the department in various positions (Assistant Director GSWA 1978–80, Deputy Director GSWA 1980–84, Assistant Director General 1984–86, Director GSWA 1986–92) until his retirement in 1992, except for a short time as Exploration Manager and General Manager of Abrolhos Oil in 1970–71. After retirement, he wrote up his work on the Zuytdorp and continued to work on the geology of the Devonian reef complexes, Shark Bay, and most recently Rottneest Island, from an office in GSWA until late in 2015.

One of Phil’s first recommendations in the GSWA was to ask the Minister for Mines to encourage WAPET to drill the anticline below Barrow Island in the Carnarvon Basin. The subsequent discovery of oil in commercial quantities in 1964 marked the dawn of petroleum production in Western Australia. Under his supervision and as part of GSWA Director Joe Lord’s drive to map all

of WA at 1:250 000, mapping was undertaken in the major Phanerozoic basins, resulting in the publication of several bulletins. Phil continued his work on the Devonian reef complexes of the Canning Basin, soon publishing the first GSWA bulletin on their geology (Bulletin 118) in 1966. He then embarked on detailed studies of significant areas of the reef complexes. One of the early results of this work was the realisation that stromatolites in the marginal slope deposits extended down slope to at least 35 m, and probably more than 100 m water depth; this was in conflict with the prevailing view in the 1960s that stromatolites were intertidal, and renewed his interest in the Hamelin Pool stromatolites where he showed that they also extended into the subtidal region. The Devonian reef complexes were the subject of several lecture tours by Phil, through the USA and Canada in 1978 as an AAPG Distinguished Lecturer; through Australia in 1980 as a PESA Distinguished Lecturer; in China in 1988 as an Exchange Scientist for the Australian Academy of Science and Academia Sinica; and through Europe in 1989 as a Guest Fellow of the Royal Society of London.

An ongoing condition of Phil's acceptance of administrative roles in the Mines Department and its later incarnations was that he be allowed to devote time each year to geological research, primarily field work on the Devonian reef complexes. Regular updates on the geology of the complexes continued through the 1980s and 1990s, together with supervision of PhD and post-graduate projects, until their culmination in 2009 with publication of the second GSWA bulletin on the complexes (Bulletin 145). This also included observations on Permian glacial pavements and subglacial channels, lakes, tunnels, cave systems, tower karst, collapse breccias, and solution dolines. En route to the Kimberley, and as separate short trips, visits to Shark Bay and the Zuytdorp Cliffs continued.

After the second bulletin on the reef complexes, completion of the Shark Bay research became Phil's top priority. The remarkable stromatolites were largely responsible for Shark Bay being declared a World Heritage Area, but were not the only focus of Phil's work. The project grew to include aspects of Quaternary coastal geology around most of WA, but particularly neotectonism and the recognition of the imprint of ancient major tsunamis on WA, from the Kimberley through the Pilbara to Shark Bay, from large cliff-top



Phil with colleagues at Windjana Gorge early 1970s

blocks in coastal areas. Phil concluded that major tsunamis, although infrequent, constitute a significant hazard in coastal areas that has not been adequately included in risk assessments. A comprehensive bulletin, again oriented towards the field geology but also including the history of the Shark Bay region, was published in 2013 (GSWA Bulletin 146). Compilation of a similar bulletin integrating Phil's work on Rottnest Island, was underway in late 2015 when Phil was diagnosed with cancer, and sadly will not be completed. Part of the Rottnest work was updating of a field guide, first prepared in 1988. Phil's final paper, reviewing the history of our understanding of the Canning Basin reef complexes appeared in print in September in SEPM (Society for Sedimentary Geology) Special Publication 107, which is dedicated to his memory.

Phil's scientific achievements and work through his career promoting the petroleum prospectivity of Western Australia have been recognized in several awards. These include: Special Commendation Award of the AAPG, Lewis G Weeks Gold Medal of APEA, Gibb Maitland Medal from the Geological Society of Australia, Honorary DSc from UWA, Honorary Membership of RSWA, the Medal of The Royal Society of Western Australia, and Distinguished Honorary Membership of PESA. He was a founding member and Fellow of the Geological Society of Australia, and a Fellow of the Australian Academy of Technology and Engineering. He served geology and other sciences as President of The Royal Society of Western Australia, Australian Petroleum Exploration Association Professional Division (WA), Petroleum Exploration Society of Australia (WA), Australian Geoscience Council, and National Trust (WA). He was also Chairman of the Board, WA Museum of Natural Science, Adjunct Professor of Petroleum Geology, Curtin University, Adjunct Professor of Geology, The University of Notre Dame, and an Honorary Associate of the Geological Survey of WA and the WA Museum.

Although Phil's geological legacy is considerable, he may be remembered by the general public for his contributions to WA's history, principally the early Dutch explorers and aspects of Aboriginal art and heritage. Phil's first tasks after his retirement from Director GSWA were a new phase of fieldwork in the Kimberley, and to complete his work on the Dutch wreck the Zuytdorp (in 1994 Phil and Tom Pepper were officially rewarded by the State as being the co-discoverers of this historic wreck). His 1996 volume "Carpet of Silver" published by UWA Press, received the Premier's Book Award for Historical and Critical Studies in 1997, and was reprinted in 1998 and 2006. He followed this in 1998 with a book on Willem de Vlamingh's voyages, "Voyage of Discovery to Terra Australis: by Willem De Vlamingh, 1696-97", after he discovered de Vlamingh's personal journal; this work was also reprinted. Phil was involved in the 400th anniversary celebrations of the landing of Dirk Hartog in Western Australia and jointly edited "The life and times of Dirk Hartog" published by the Royal Western Australian Historical Society in 2016. These interests also led to several public lectures and articles, the chairing of committees promoting aspects of WA's pre-colonisation

history, and the installation of a replica of Dirk Hartog's plate on Dirk Hartog Island. Parts of the bulletins on the Devonian reef complexes and on Shark Bay were devoted to the history and Aboriginal heritage of the West Kimberley and the Shark Bay areas, respectively. In 1998 he was made a Member of the Order of Australia (AM) for 'contributions to geology and the history of early Dutch exploration and shipwrecks in Australia'. His life has truly been that of a renaissance man.

Phil is survived by his wife, Cynthia, children Julia and Katherine, and grandchildren James, Eloise, Laura and Max.

[Compiled by Tony Cockbain, Roger Hocking and Pam Reid from 'Biographical Notes' written by Phil Playford in May 2000].

Addendum by The Royal Society of Western Australia

As can be readily appreciated from the above, Phil has been generous with his involvement in organisations beyond those more work-related, one of these being The Royal Society of Western Australia. He first joined the Society in 1952 which in recent times must have made him one of its longest continuously involved members. He joined Council in 1965–66, became Vice President in 1967–69, and President in 1969–70 followed by a further year as the Immediate Past President 1970–71. Phil remained a Council member until 1984 then took a break until a second period of service between 1989–93. In 1999 he was given Honorary Life Membership of the Society and in 2001 awarded the Society's highest accolade, the Medal of The Royal Society of Western Australia. It was fitting and a reflection of his keen interest and concern that in 2014, the Society's Centenary year, Phil should join the Centenary Sub-committee to assist plan and guide the range of events undertaken to celebrate this significant milestone. It will be many years before we will see his like again; Council and members are most grateful for Phillip Playford's service to the Society and the pursuit of science in Western Australia.

[Compiled by William Loneragan, Lynne Milne and Greg Benjamin].