Obituary

WALTER CAMPBELL SMITH, CBE, an authority on Antarctic geology, died on 6 December 1988, aged 101. Born in Solihull in 1887, Walter Campbell Smith attended Solihull School. In 1906 he went up to Corpus Christi College, Cambridge, where he read Crystallography and Mineralogy, together with Geology and Petrology. He graduated in 1909, taking first class honours in both parts of the Tripos Examination. In 1910 he was appointed as an Assistant in the Department of Mineralogy at the British Museum (Natural History), where he remained for the rest of his working life apart from two spells with the armed forces in 1914–18 and 1939–41.

Although his primary interests were mineralogical, Campbell Smith was first put to work at the Museum on the extensive and recently acquired Geological Society rock collections. It was also at this time (1913) that the Terra Nova returned from the Antarctic and the rich collections made during the expedition went to the British Museum (Natural History). Campbell Smith wrote eight papers on the rock collections, the whole of which he curated. A paper on the metamorphic rocks of South Victoria Land was co-authored with F. Debenham and R. E. Priestley, but he himself tackled the collections of igneous rocks from South Victoria Land, the Ross Archipelago, Cape Adare and the Terra Nova Bay region, also describing erratics from Granite Harbour and the Bay of Whales. The work was completed in 1963 with a survey paper on the geology of South Victoria Land. He was also involved with research on some of the material collected during the Shackleton-Rowett (Quest) Expedition. Numerous other papers were written on a wide range of petrological topics, including alkaline igneous rocks and carbonatites, oceanic islands and meteorites, together with many mineralogical and historical papers and catalogues; about 100 in all. Walter Campbell Smith was exceptionally well liked by all who came into contact with him, and his interest was always an inspiration to those involved in similar research. He died a few days after his 101st birthday.

A.R. Woolley

JAMES INGLIS MOORE, MBE. 'Jim' Moore, the second engineer on *Penola* (British Graham Land Expedition 1934-37) died on 8 March 1989 aged 78. He was a mountaineer (President for several years of the Mountain Club of Kenya), a pilot, expert skier and sailor. His boat *Blue Pilot* was well known in Cornish waters.

Jim was an undergraduate at St John's College when the members of the Watkins Expedition returned from Greenland with their films and knowledge of kayaking, and he was keen to learn to use and roll a kayak. Having no boat he made drawings from a kayak in the Scott Polar Research Institute and built his own, which he learned to roll from photos and information in *Northern Lights*, the account of the expedition. He was encouraged in this effort by Prof Frank Debenham, the Director of SPRI, and by Betty Creswick, the Director's sole assistant at Lensfield House, who later became Mrs Moore. In 1932 Jim joined the Cambridge West Spitsbergen Expedition, which sailed from Kings Lynn in a 30 ton fishing smack, cutter rigged with auxilliary engine. Engine trouble caused considerable delay and finally, leaving Bodo, a new engine was installed. Little did Jim realise that history would repeat itself two years later in *Penola*.

He joined the British Graham Land Expedition as second engineer. He and the chief engineer, Lt Hugh Millet, did a remarkable job in getting *Penola* through the Doldrums by constant coaxing of the the two tiny 50 hp engines in a stiflingly hot and very small engine room. Later trouble with the warping of the engine beds made a major resetting of the engines necessary in Port Stanley, where the two engineers again revealed their skill and determination. On arriving at the Argentine Islands base, Jim became a member of the shore party and had great hopes of taking part in the major sledge journeys, but having made a start on two such journeys, owing to poor circulation he had to retire with bad frost bite. Nevertheless his engineering skills were still put to good use both on the maintenance of the tractor and, in conjunction with Wilfred Hampton, in the design and construction of the new base at the Debenham Islands. Jim's determination and skills made him an excellent member of an expedition — he had rowed in the 'Trial Eights' at Cambridge and it was always a joy to watch him sculling with great skill and precision a very unwieldy and heavily laden makeshift raft from ship to shore.

Jim joined the ship's party again for the journey home which for most of the time was under sail, and it must have given him tremendous pleasure when they reached the trade winds and actually made 1276 miles in seven days! On his return to England he married Betty Creswick, and they then emigrated to South Africa. During World War II he served with the South African Engineers in the Abysinnian Campaign and later with the Eighth Army from Alamein onwards. He was awarded the MBE and mentioned in dispatches. Altogether he was in Africa for 27 years, latterly in Kenya where he was Chief Mechanical Engineer for the Kenyan Government. He retired to Cornwall in 1964.

Alfred Stephenson.

Prof NIKOLAAS TINBERGEN, FRS, Oxford ecologist and ethologist, died on 21 December 1988. Born in The Hague, Netherlands, in 1907, he trained in zoology and studied behaviour in insects for his doctorate at Ley-

den University in 1932. Like several other distinguished ecologists of his generation, Tinbergen derived life-long benefit from an early experience in a polar habitat; as guests of the Dutch International Polar Year (1932–33) expedition he and his wife Elizabeth spent several months near Angmagssalik, Greenland, where they studied the ecology and behaviour of shorebirds. In 1936 he became Lecturer in Experimental Zoology at Leyden, and in 1937 studied bird behaviour with Konrad Lorenz in Vienna. From their collaboration then and later came new insights into instinctive behaviour and ultimately the development of the new science of ethology, the systematic study of behaviour.

After imprisonment by Nazis in his own country during World War II, Tinbergen became head of his Department at Leyden. In 1949 he joined the Zoology Department of the University of Oxford as Lecturer in Animal Behaviour. His simple approach to field studies

and experiments, applied particularly to gulls, fresh-water fish and butterflies, contrasted sharply with the complexities nurtured by laboratory-oriented behaviourists of the time, and attracted many students of zoology and related disciplines to ethology. His work became known to a wide public through books, articles, award-winning films and television.

Tinbergen was appointed Reader in Animal Behaviour in 1960, FRS in 1962, Professor in 1966, and received a joint Nobel Prize in 1973. After retirement he applied his insights to the behaviour of autistic children, publishing with Elizabeth in 1983 Autistic children: new hope for a cure.

All who were fortunate enough to have worked with Niko will remember his stimulating lectures and seminars, inspired fieldwork, and his kindness, courtesy, helpful disposition and good humour.

Bernard Stonehouse