## GEORGE ALBERT SWAN PhD DSc CChem FRSC (1917–2012)

George Swan, author of the monumental *Flora of Northumberland*, died at the end of October 2012, aged 95. He was born in Gateshead in 1917, attended Newcastle Royal Grammar School and went on to read chemistry at Armstrong College, Newcastle (then part of the University of Durham).

He studied botany as an ancillary subject, which involved field meetings led by Professor JW Heslop Harrison. George proved to have a flair for field botany (he was largely self-taught), and undertook private trips as a student to localities in Upper Teesdale and the Lake District. His own records in the Flora date back to 1936, and his first contribution to the local natural history magazine The Vasculum was in 1939. He was encouraged by George Temperley, Honorary Secretary of the Natural History Society of Northumberland, Durham and Newcastle upon Tyne, and was later bequeathed Temperley's herbarium. Shortly before his death George donated the joint herbarium to the Society.

While in the field, George's pleasure in mountain walking increased such that he eventually climbed all of the higher peaks in the Lake District, two-thirds of the Scottish Munroes and many high peaks in the Alps. As a young man he would cycle from his home on Tyneside the forty miles or so to Alston in the North Pennines, climb Cross Fell (at almost 3,000 feet) and then cycle home the same evening.

After graduation in 1938 George continued as a research student and then was attached to a War Unit set up to tackle nationally urgent chemical problems. After the war he took up an ICI fellowship in King's College (the former Armstrong College), and was then appointed to a lectureship. In 1974 he became Professor of Organic Chemistry in what by now was the University of Newcastle. His work was especially in melanin pigmentation and the alkaloids, and he was the first recipient of the Myron Gordon Award of the Interna-

tional Pigment Cell Society. After formal retirement he continued research into the compound hermidin, involved in the colour change of *Mercurialis perennis* to indigo when dried – indeed much of George's work was on the chemistry of compounds derived from plants. There are many comments in his *Flora* on the chemical properties of plants.

George's interest in field botany was rekindled in the mid-1950s by Dr Kathleen Blackburn, Reader in Botany at King's College and an energetic member of North East England natural history circles. Katy had taught him as an undergraduate, and she explained forcefully to George (he later recounted) that she wished him to begin collecting records for the BSBI's planned Atlas. As a result he began to record systematically in both Northumberland and Durham, thus necessitating the acquisition of a car. By the time the Atlas was published in 1962 George had become BSBI's recorder for Northumberland's two vice-counties, 67 and 68 (when he relinquished the recordership in 2007 he had been recorder for at least 45 unbroken years, surely a record?). He became intimately familiar with the large county which contains huge stretches of semi-natural habitat - made possible by his prodigious walking capacity - and was a very highly regarded and scholarly field botanist, serving on the Council of BSBI. His first records for Northumberland, or re-finds after supposed extinctions, are far too numerous to mention, but Alchemillla micans (then A. gracilis) was a first for Britain.

Many records were collected in the company of his wife, Margaret, herself an extremely competent botanist and walker of great stamina. She had met George while employed as a librarian at the University, and they married in 1947.

While collecting records, George persisted in hoping that a local botanist would write an up-to-date flora of Northumberland, but it was increasingly clear that there was only one candidate for the task - George knew Northumberland's flora better than anybody else had ever done (or is ever likely to). This was explained to him by another indomitable woman, Mrs Grace Hickling, then Honorary Secretary of the Natural History Society (since re-named "of Northumbria") and editor of its Transactions. Grace was aware that her Society had jointly published the predecessor New Flora of Northumberland and Durham (Baker & Tate, 1868) and was anxious that it should publish a successor, at least for Northumberland. Furthermore, George had been a member since 1937, leading many field trips and serving on the Society's Council. (At his death he was the Society's longest serving member.) So, after ten years of work by George and the Society's staff, the Flora was published in 1993. Far more than in the case of most modern Floras, however, the Flora of Northumberland was a solo (or at least duo, pace Margaret Swan) rather than a team enterprise. It was composed with hand-written copy delivered in batches to the Society's office, the proofs meticulously checked, and every dot distribution map manually compiled with Letraset symbols by George, whom computers had completely bypassed. Unfortunately the constraint of more or less solo collection of data across a huge county enforced what is now a rather awkward  $5 \times 5$ km square recording unit on the *Flora*.

In 2001 George published *A supplement to the Flora of Northumberland* containing new records, and earlier ones which had only recently come to light

Since publication of the *Flora* George broadened his researches into experimental taxonomy, with a major contribution being the clarification of structure within *Trichophorum cespitosum*, some taxa of which were a feature of the numerous *Sphagnum* mires in west Northumberland (Hollingsworth & Swan, 1999; Swan, 1999, 2003), and until within a year or two of his death he was undertaking similar work on *Eleocharis mammilata* agg. and *Vaccinium oxycoccos* agg.

Apart from his interest in mountains George was a classical music lover, regularly attending concerts in Newcastle.

Shortly before retirement the Swans moved from Newcastle fifteen miles north to Morpeth, where their newly-built house was situated immediately above ancient valley woodland, part of the woods in which William Turner of Morpeth had botanized half a millennium ago. George and Margaret continued to live there until a few weeks before his death. He is survived by Margaret. George will be greatly missed – he was a kind and considerate man.

## References:

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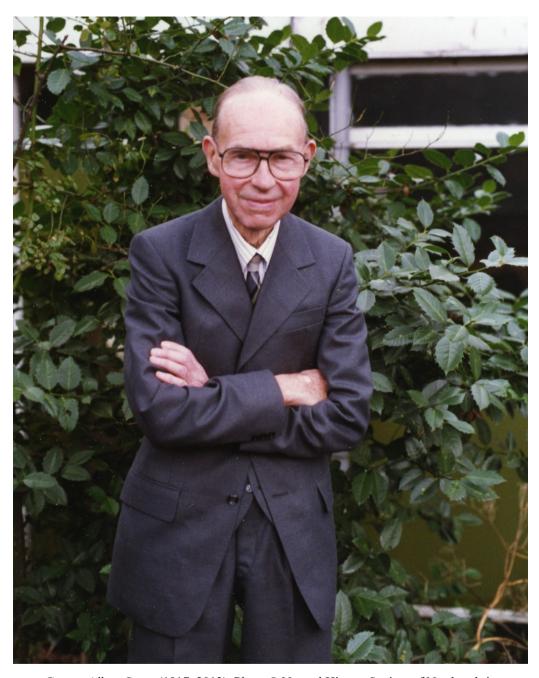
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[There are still some copies of the *Flora of Northumberland*, and *Supplement*, available, at the reduced price of £18 for both, plus £5 p&p (£12 plus £5 p&p if a member of NHS Northumbria). Orders to Natural History Society of Northumbria, Great North Museum: Hancock, Newcastle upon Tyne NE2 4PT (cheques payable to Natural History Society of Northumbria).]



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