Who was ... Alfred Merle Norman?

Clergymen-naturalists were not uncommon in previous centuries. Canon Norman was one of these. When his collections were acquired by the British Museum (Natural History) it was probably the largest in private hands. It represents an important source of diverse study material.

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Taxonomists who need to consult the invertebrate research collections in the Natural History Museum, London – formerly The British Museum (Natural History) – are soon made aware of the name A M Norman as a significant contributor to these collections. The 'Norman Collection', as it is often termed by Museum workers, was purchased by the British Museum (Natural History) over several years during the last century. It comprised in excess of 11,000 species and represented a collection of invertebrates amassed by private hands that was probably not equalled by any other in Europe. It is an invaluable reference source for taxonomists studying North Eastern Atlantic faunas. So who was A M Norman?

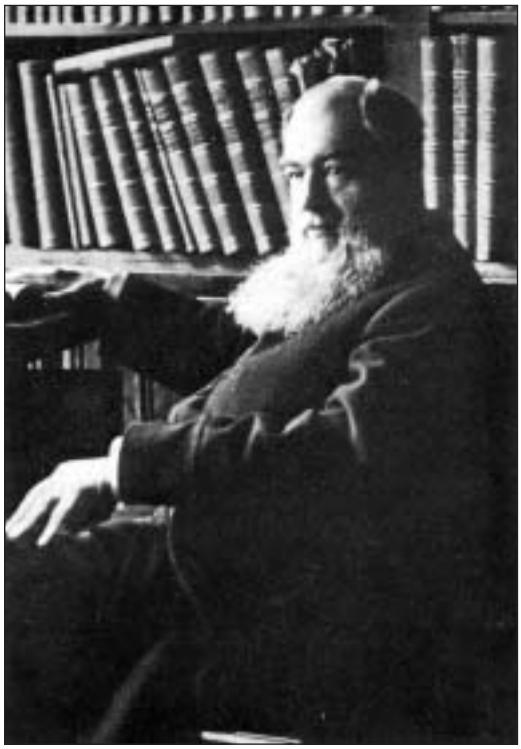
The clergyman-naturalist

Norman was one of the clergymen-naturalists. He was born in Exeter in 1831 as the last of five sons of a second marriage. His father was a landowner, surgeon and Deputy-Lieutenant of Somerset. Alfred Norman's interest in natural history collecting probably began when he was a boy, with studies of the molluscs and plants of Somerset. From 1844-1848 he attended Winchester College from where he matriculated to Christ Church, Oxford, obtaining his BA in 1852 and MA in 1859.

His interest in marine biology seems to have already begun by 1853-1854 through regular shore collecting when he was a private tutor to the Dowager Countess of Glasgow at Millport, Isle of Cumbrae. From Cumbrae he went to Wells Theological College and was ordained as a deacon in 1856. He became curate of Kibworth Beauchamp, Leicestershire in the same year, ordained as a priest in 1857 and the following year appointed as a curate in Sedgefield, Co Durham. From 1864 until 1866 he held the position as curate of Houghton-le-Spring, Co Durham. In 1866 he was made Rector of nearby Burnmoor and in 1867 Chaplain to the second Earl of Durham. In 1885 he was appointed a Canon of Durham Cathedral.

As a clergyman Norman was fully committed to the work in his parish and found recreation in natural history studies similar to other clergymen-naturalists of the mid and late Victorian era. During the 29 years at Burnmoor he was considerably involved with church matters and also, by contrast, with many scientific societies including the British Association for the Advancement of Science, the Conchological and Malacological Societies and the Museums Association. He also continued his long association with the Tyneside Naturalists' Field Club and was a member of the Natural History Society of Northumberland and Durham. In 1895 he returned to Houghton-le-Spring as Rector and Rural Dean where he remained until 1898 when illness forced his retirement. He then moved to Berkhampsted, Herts where he still maintained an active life of collecting, research and publishing, even to the age of 80, before being completely disabled by illness. He died in October 1918 at the age of 87 and his accomplishments were recorded in numerous obituaries.

Norman's contribution to the natural history of that time was formative. He published in excess of 200 papers. Early ones were on birds, insects, amphibians and fishes, but later publications were chiefly studies of marine and freshwater invertebrates. These included major works between 1857 and 1861 on molluscs of the Firth of Clyde and, between 1890 and 1899, important reviews of the Mollusca. His account in 1865 on some groups of British echinoderms was the first major



A M Norman *circa* 1910. the original forms the frontipiece to Alder and Hancock's *The British Tunicata* Vol 3, 1912, completed by Norman

contribution to these groups since Edward Forbes' *British Starfishes* of 1841.

In later years he published important studies on several groups of crustaceans, some in collaboration with other naturalists. Of worthy mention is the 1886 account with Thomas Stebbing (also a clergyman-naturalist) on isopods collected by the dredging expeditions of the vessels *Lightning, Porcupine* and *Valorous*. He collaborated with Thomas Scott to produce, in 1906, Norman and Scott's *The Crustacea of Devon and Cornwall*, and in 1909 with G S Brady for Norman and Brady's *The Crustacea of Northumberland and Durham*. Norman illustrated his papers with simple line drawings that show considerable detail. These varied little in quality over the years and were superior to the illustrations of some of his contemporaries.

The Shetlands

An important event occurred in Norman's life when John Gwyn Jeffreys invited him to participate in the various dredging expeditions around the Shetland Islands. Jeffreys, a conchologist, had visited the Shetlands in 1841 and 1848 and had discovered species new to the British fauna and a few previously known only from late Pliocene fossils. The Shetlands were then of great interest. Edwards Forbes, John Goodsir and Robert MacAndrew had previously all collected in that region and had added at least a dozen species of invertebrates not previously recorded from British waters. Jeffreys and the British Association funded these collaborative excursions for the most part, but other participants also contributed, including Norman. Their object was to elucidate the fauna of the northernmost British seas and to compare it with that of the Norwegian fauna then being explored by two renowned Norwegian naturalists, Michael and Georg Ossian Sars. Jeffreys also was keen to investigate the deeper water molluscan fauna by dredging below depths affected by glaciations.

Norman participated in three of these expeditions to the Shetlands in 1861, 1863 and 1867. He was afforded the opportunity of collecting and preserving animals of all invertebrate groups caught in the trawls and was asked to work up some of the groups collected.

Norman enhanced his ever-growing collection by five dredging expeditions to Norway between 1878 and 1893 in order to continue his studies on the relationships between the Shetland and Norwegian marine fauna. He chartered a boat and arranged for the dispatch of his collecting equipment to Norway. This included several different size dredges, a trawl, tow net, hand-nets, a hand winch, hundreds of fathoms of rope and other line, sieves, bottles and preservatives. He found the most rewarding catches were obtained by dredging the nearly vertical walls of the fjords. This was accomplished by lowering the dredge offshore and then moving the boat inshore to the cliff edge. From here the dredge was gradually hauled, sometimes precariously, to the rock surface. For the 1890 visit, Norman joined H Sparre Schneider of the Tromsø Museum, Norway, to study the cold-water fauna of the Varanger and Sør Varanger Fjords east of the North Cape in Finmark. In addition to dredging they collected plants and insects, noted the mammals and mentioned the torments suffered from clouds of mosquitoes. Specimens collected were used for his monograph on northern Bryozoa and for his extensive faunal list of this high latitude.

Norman was a devoted collector; his numerous field trips included almost every region of the British Isles. The majority of these were made during his summer vacations. His interest was primarily the North Atlantic region north of 35°N, including Greenland, the Atlantic coast of North America and the Mediterranean. However, he extended this region for terrestrial and freshwater fauna (particularly mollusca) to include most of Asia north of 38°N and west of Lake Baikal (excluding Manchuria). He also made exchanges and purchases of specimens with other collectors and corre-

spondents and this enabled him to amass such an imposing private collection of invertebrates.

Burnmoor

As his collections increased he had an iron-framed outbuilding erected in the garden of Burnmoor Rectory to accommodate the larger items. Small specimens were kept in the Rectory in corked glass vials or small boxes and trays in specially constructed cabinets. He was a conscientious curator and gave much thought to storing and arranging his collections and probably made frequent rearrangements as it increased in size through additions and exchanges. To facilitate the latter he published lists of his collection. The first in 1886 with the title *Museum Normanianum* and supplements were added as the collections grew. The last part of the catalogue was published in 1910 and listed some 11,086 species, the majority of which were molluscs. His collections were purchased by the British Museum (Natural History) in four instalments between 1898 and 1911 but he also presented many specimens to the Museum.

From a study of the preserved material collected from the Shetland expeditions, he concluded that these Islands formed an important meeting place of the northern and southern faunas. His studies of these northern faunas also led him to conclude that the British seas had been colonised chiefly from the southern regions following glaciation periods but that a limited number of Arctic species had remained. He suggested that this re-colonisation had occurred by way of the western regions of the British Isles to the Shetlands and Scandinavia. He concluded that species had gained access to the North Sea through northward flowing Atlantic waters, or directly from Scandinavia, and that species were further dissipated in the North Sea by southward flowing currents. Numerous plankton surveys made by oceanographers of this century have confirmed that Atlantic northern plankton is periodically carried into the North Sea, and that Atlantic water currents flow around the Orkneys and Shetlands, thus vindicating Norman's early speculations.

'The greatest dredger'

Norman's working religious life seems to have been totally divorced from that of his interest in natural science. He worked hard at both and has been described as a pious clergyman, an assiduous taxonomist and a recognised authority on nearly every group of marine invertebrates. E Ray Lankester referred to him as "the greatest dredger of his day". Eric Mills (1980) in his excellent biographical account of Norman remarked that his studies "formed an important bridge between the older natural history in the tradition of Gilbert White and the emerging profession of science supported by government and the universities". Norman was elected a fellow of the Linnean Society in 1880 and was awarded its Gold Medal in 1906. He received an honorary DCL from the University of Durham in 1883 and was elected to the Royal Society in 1890.

As Mills suggested, it is difficult to find any hints of Darwinism in any of Norman's published works, except perhaps for one paper on cephalopod diversity. Perhaps as a conventional taxonomist chiefly interested in local faunas he did not feel the need to become involved in the polemics of the time. The legacy of his vast, rich and meticulously documented collections of Northern European invertebrates has proved and provided an invaluable source of study material during the last and this century for taxonomists consulting these collections at the Natural History Museum, London. This alone justifies his place as an important Victorian contributor to natural science.

An excellent account of the life and work of A M Norman, on which much of the above is based, can be found in: Mills, Eric L (1980) One "different kind of gentleman": Alfred Merle Norman (1831-1918), invertebrate zoologist. Zoological Journal of the Linnean Society ***68****, No 1, pp 69-98. This paper contains a bibliography of Norman's published papers.*

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