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Biology Curators Group Newsletter

Title: Marine Section

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Source: Picton, B. E. (1981). Marine Section. *Biology Curators Group Newsletter, Vol 3 No 1*, 30 - 31.

URL: <http://www.natsca.org/article/1860>

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Deficiencies and remedies

As has been explained in the introductory paragraphs the collections in Belfast rank well below those of the other national and some provincial museums, excepting the Irish material held here. The collections are especially poor in land and freshwater invertebrates other than insects and molluscs and a beginning has been made to rectify this. A great problem for this section is a lack of literature, or its alternative, access to literature. The last is more difficult to remedy but progress is anticipated. Given the history of the collections the situation would seem unpromising. However the lack of old collections may be seen as an advantage in that the taxonomic significance of old collections, excepting types, is frequently a good deal less than their size. Occasionally an inverse relationship exists, material having taken precedence over documentation. The utility of many old collections is consequently at least questionable. The future here, then, lies in modern, well documented, well researched collections linked to data retrieval systems.

MARINE SECTION

THE COLLECTIONS

Since 1972 the department has followed a policy of collecting marine invertebrates in connection with faunal survey work in Ireland. The eventual aim is to build up a collection of well-documented material, with information on habitats and distributions, of species from the North East Atlantic. There is little wet-preserved material of historical interest. It is assumed that at one time specimens collected by the Belfast based naturalists, William Thompson, George C. Hyndman and others must have been an important part of the collections. Shells and a collection of pressed hydroids and bryozoans from this era provide a tantalising glimpse of what the collections might have been, had curation in the intervening years been adequate. Nevertheless this lack of historical material does mean that all the effort of the section can be directed towards the building of collections with no preimposed constraints.

It is our policy to collect all groups of marine invertebrates, but naturally there is considerable bias due to the people involved and the nature of the collecting methods. Most of the specimens are collected by SCUBA diving, either by the museum diving team or by temporary assistants who have joined the team during the summer. Most of the collecting has been done during faunal surveys of particular areas, Strangford Lough receiving considerable attention and periods having been spent in Dundrum Bay, Co. Down and Portrush, Co. Antrim. In addition B.E. Picton has been collecting material for an Irish list of nudibranch molluscs, aided by grants from the Praeger fund of the Royal Irish Academy and by diving assistance from the Queen's University Sub-Aqua Club. Other areas visited include Lundy Island in the Bristol Channel, several Scottish localities (as part of a Nature Conservancy Council Survey team), the Faeroes and Iceland (with British Sub Aqua Club expeditions). These expeditions have resulted in the acquisition of a fairly representative collection of sponges, coelenterates, echinoderms and ascidians, as well as extensive collections of nudibranch molluscs.

An important aspect of the collecting effort has been the documentation of sites and specimens by underwater photography. Most specimens of new or unusual species are photographed in situ before collecting, or in the case of smaller animals in tanks in the laboratory while they are still alive. This has resulted in a large collection of colour transparencies linked to the specimens and providing information on the colour and appearance of the species in life. These photographs can also be used to familiarise divers with species so that recording of ecological information can take place without any risk of over collecting. As a sideline the section has been closely involved with the production of photographic identification guides which have been produced by the Underwater Conservation Society.

In the field of Marine invertebrates, perhaps even more than in the Terrestrial invertebrate field, there is still much systematic work to be done. In most groups discovery of extensions of distributions, such as new Irish records, are quite common, and the discovery of new species to science is not infrequent. It is because of this, and because much of the literature is not adequate, that it is so important to continue building collections of well-documented marine material. In the last ten years the publication of the series of Linnean Society Synopses of the British fauna has been an invaluable contribution to invertebrate taxonomy, providing the impetus for further discoveries by making identification of the groups covered less daunting. The earlier literature on marine invertebrates is mostly Victorian, out of date, difficult to obtain and hard to use.

Most of the material in the Ulster Museum marine invertebrate collection is catalogued onto a card based system, new material being catalogued as it is added. This is invaluable in groups such as the sponges where it is important to have a unique number to link a specimen, a microscope slide and a photograph. It is envisaged that this information will eventually be stored on computer file, to allow more easy data access, but at present this is held up by lack of appropriate facilities.

Criticism is sometimes mounted against the operation of a diving team, which involves considerable financial outlay compared with other methods of collecting. In any comparison of this sort it is important to remember that any method of collecting marine invertebrates, whether dredging, grabbing, or diving, is bound to be more expensive than collecting on land. In terms of quality of results, the diver, who can collect specimens, habitat and abundance information, work in rocky areas effectively, and take photographs, can produce results, which are simply unobtainable except by "having a man on the spot".

B.E. Picton