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## Biology Curators Group Newsletter

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Three black-winged stilts; shot by Atkins,  
Cowbit near Spalding, no date.  
Three Pallas' sand-grouse; three of several  
taken by Brogden in S. Lincs in 1888,  
& a taxidermist's model of a Great Auk.

The writer would be glad to hear from anyone having any information relating to the original Lilford collections. It is believed that many of the species may have been bred in captivity, in particular the birds of prey and the wildfowl. It is known that some were obtained from Rosenberg, London, and that a few were shot in Portugal and the south of France.

E. J. Redshaw  
Hon. Assistant Curator  
Spalding Gentlemen's Society  
The Museum  
Broad Street  
Spalding  
Lincs

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#### BIRMINGHAM NATURE CENTRE

The Natural History Section of Birmingham Museum and Art Gallery is famed for its fine life-size model of the carnivorous dinosaur Tyrannosaurus rex, complete with sound effects. A distance of two miles from the Museum on the edge of Cannon Hill park you can see by way of contrast another side of the department's enterprise in the shape of the Birmingham Nature Centre.

In 1972 Birmingham Zoo, which was managed by an investment company, closed down, and an opportunity arose for the City Council who owned the four acre site, to develop it as some form of leisure garden. It was due to a far-sighted leisure services committee inspired by the knowledge and fertile imagination of Peter Hanney, late Keeper of Natural History, that a Nature Centre was proposed to replace the zoo. During 1973 plans were drawn up for a Nature Centre, which would be a free public amenity aimed at enabling the people of Birmingham in particular to gain some knowledge and enjoyment from nature and the countryside. The ideas were both novel and realistic, and were widely acceptable to the Director of Museums, the General Manager of Parks, and the Leisure Services Committee, each of whom was to play a significant part in realising this ambitious project. A leisure service's sub-committee working party was soon formed to steer a course for the Centre, and included councillors with a genuine concern for the success of this new venture.

Although its conception was a swift process, the Centre's gestation period was the opposite. This was due mainly to the fact that major landscaping and building works had to be carried out in order to transform a rather run down and sterile zoo site into something which, given time, could justly be called a Nature Centre.

In the early stages of discussions it had been agreed that the Parks Department would be responsible for the purchase of the zoo buildings, initial landscape work and eventual upkeep of the more formalized garden. The Museum would provide for staffing, livestock and day to day running of the Centre. Inevitably there was some overlap between the two departments' roles according to availability of money and labour resources. After almost two years of highly intensive work on the part of Parks, City Engineers, Public Works and Natural History departments the Centre was officially opened in April 1975. The opening ceremony was a rather grand civic affair that coincided with the official launching of the Birmingham Nature Centre Wildlife Appeal run jointly by the City Council and the World Wildlife Fund. The Appeal Committee consisted of members of the Working Party, the Director of Museums and the Keeper of Natural History along with an Appeal Director for the World Wildlife Fund, under the chairmanship of Birmingham industrialist Sir Frank Price. Patrons of the appeal included other Birmingham and Midland names associated with local industry. The appeal lasted about ten months and went some two thirds of the way towards its target of £35,000. The money raised was to be used to carry out capital projects that could not be financed by City Council budget. In addition to the variety of monied gifts, which have ranged from small donations by school children to substantial sums by individual companies, gifts in kind were received. These have varied from golden pheasants to turf, trees, loads of sandstone and puddle clay for creation of miniature wildlife habitats.

There is insufficient space to illustrate how the Centre, still in its infancy, has attempted to achieve its objectives, so an account of some of its more successful features must suffice. Only a visit, preferably in Spring or Summer, will bring home the true value of the Centre as a place where people from the city can enjoy and learn from a variety of British and European wildlife seen at close quarters. The Centre has been likened to an amalgam of zoo, museum, wildlife park, garden and nature trail, and so we believe it is quite a unique animal.

Since it opened the Centre has acquired a further two acres of land, making a total six acres. It is situated in a favourable area of the City to attract a good deal of urban wildlife, from the ubiquitous fox to the occasional kingfisher, being close to Cannon Hill and Edgbaston Parks and the Botanical Gardens. It is also near to large and often derelict grounds in the Moseley, Edgbaston and Selly Park areas. The Centre is bounded on the west by the busy Pershore road, and on the

east by the River Rea; here it backs onto the Cannon Hill park. To the north, except for a chain-link fence it is continuous with the park, and to the south it is bounded by a park service road, landscaped drainage culvert and private gardens.

One of the most important and imaginative features of the Centre is its system of man-made ponds and streams, planted and stocked with appropriate vegetation and fish. A reservoir pool allows water to flow along a stream at a rate of from 50 to 100 cubic feet per hour, and in this way attempts to simulate a lowland reach in miniature. The stream has undergone some natural colonization by algae, water plants, invertebrates and a few vertebrates such as stickleback and frogs. The stream flows into a shallow pool 36' x 24' at the side of which is a marshy area. In the pool the observer is able to learn something of the freshwater life to be found in the various zones and niches of a pond. During the short time since it was established this area of water and the surrounding reeds and sedges have attracted frogs, dragonflies, and reed-buntings. The water leaving this pool is carried by another shorter stream leading through a small boggy area before emptying into another deeper pool. This is stocked with coarse fish such as barbel, tench, carp and roach which can at times be observed through underwater windows. The water in this pool is fed back to the reservoir pool direct through an underground pipe by means of a high-powered centrifugal pump. The total volume of water involved in this closed system amounts to 5,500 cubic feet. The variety of freshwater habitats which this feature provides has particular potential for preliminary studies with primary school children from the city. Associated with it is a building housing aquaria displaying freshwater fish, amphibia and some invertebrates.

There is in addition to the ponds and streams a water course (Bourne Brook) which rises several miles to the west of the Centre and which flows through it on the northern side before it joins the river Rea. Though the brook has a bricked bed and acts as a drainage channel it is capable of supporting a certain amount of life. The water is regularly monitored by the Severn Trent River Board, who have given authority to place removable weirs at intervals along the channel to encourage greater colonization. There is obvious scope here for elementary pollution studies. The water course is a natural wildlife corridor for certain species of birds, including Kingfisher, Grey Wagtails and House Martins.

The landscaping carried out during the Centre's conversion from a zoo included a great deal of planting, though many of the trees suffered in the 1976 drought. Many flowering and berry-bearing shrubs, herbaceous perennials, including a wide selection of herbs were planted with the particular needs of insects and fruit and seed eating birds in mind. From a year before the Centre opened up to the

present day observations have been made on the populations of ants, solitary bees and bumblebees that breed here or collect pollen and nectar from the cultivated and wild plants. Among the birds which benefit from these plants are Goldfinches, Yellow buntings, Stonechats and Bramblings. Several pairs of magpies nest each year on the perimeter of the Centre, feeding on the areas of pasture used to keep a flock of Soay sheep. These birds are also one of the main predators of wood ants imported from Wyre forest and living on a moated island - to prevent excessive predation the nest has to be protected during part of the year by a metal cage. Although there are a few mature trees in the Centre, on which bird nesting boxes have been erected, some of the cedarwood buildings that house displays and live exhibits have been used as sites for martin and swallow boxes.

One area of rough grassland and scrub has been set aside for a small apiary consisting of four hives illustrating the National, WBC and traditional styles. One colony lives in a section of hollow tree and is not managed. Consequently it swarms several times each year and, apart from being a good insurance against loss of one of the managed colonies it invariably provides an on-the-spot display to illustrate colony reproduction. Associated with the apiary is a building containing a large observation hive in which many of the activities of a honeybee colony can be seen at close quarters. The hive was specially designed to take six frames so that the colony would be able to sustain itself through the Winter without special attention. A particular refinement of the hive is Pilkington vacuum double glazing which reduces excessive heat loss and condensation. This exhibit has been one of the most popular, and along with the conventional hives has been used widely by schools, and by myself as a teaching and demonstration aid. Another of its attributes is its ability to show building of queen cells, colony behaviour prior to swarming, and emergence of a new queen. I am often asked by the public what we do with the honey. Where possible the honey surplus to the bees' needs is extracted, and the process, at least the preliminary stages, can be a fascinating spectacle. In 1975 honey was extracted from two colonies then kept, and was sold with the Centre's own label listing the plants from which it was made. Since 1974 when hives were first kept regular observations on the foraging behaviour of the Centre's honeybees have been recorded and the information used to form displays as a back-up to one on the life-history.

Another special feature involving insects is a butterfly and moth breeding house and walk-through enclosure where, in the summer months larval, pupal and adult insect can be seen. The enclosure is planted out with nettles, bramble, currant, buddleia and other plants which provide food sources for larva and adult. This may not be one of the easier exhibits to maintain, but judicious selection of a few commoner species can provide an enjoyable and at the same time instructive spectacle. Among species that have been reared are peacock,

small tortoiseshell, red admiral, poplar hawk, elephant hawk and lime hawk. As well as captive species the Centre's rough grass areas and flowering shrubs attract a variety of lepidoptera, including brimstone, common blue, meadow brown and skippers.

The small mammal or rodent house, designed and built by Peter Sewell, has always been one of the main attractions showing as it does a selection of British mammals such as harvest mouse, house mouse, wood mouse, edible and common dormouse, and brown rat. By means of red light the animal's day is turned into night enabling the visitor to observe some aspects of behaviour. Inevitably, there have been casualties, and the number of species exhibited has fallen. It is eventually planned to modify the display and to incorporate outside enclosures for grey squirrel, marmot and porcupine. Recently a rabbit warren has been constructed in a grassed compound surrounding the mammal house, and this summer this will be ready for the introduction of domestic rabbits possessing the wild-type coat colour.

A covenanted donation has enabled the present Keeper of Natural History, Brian Seddon, to design a vivaria for the display of British and European reptiles and amphibia. There is a range of dry, moist and watery environments set aside for the appropriate species or association of different species, each with controlled heat and plant growth-promoting illumination. One large wet vivarium takes advantage of natural sunlight passing through two large picture windows. In the vivaria, which will shortly be open to the public, most of the British species and a few southern European ones will be seen.

Several large aviaries accommodate birds, including barn and tawny owl, common and golden pheasant, carrion crow, rook, jackdaw and jay. The corvids in particular provide instructive exhibits on account of their feeding and food catching behaviour, not to mention their powers of mimicry! Seasonal exhibits include a demonstration egg incubator in action in which eggs laid by the Centre's bantams, ducks and pheasants are hatched.

Neighbouring enclosures house wildcats and a pair of badgers. The badgers were obtained as orphaned cubs in 1976 from the Forestry Commission in Sussex and were reared by hand for a time. They were eventually given a specially landscaped and secure enclosure built mainly by voluntary labour, in which was made a consolidated mound of soil reinforced by rock and old tree trunks. The animals soon constructed their own sett in preference to the stone-built den also provided. During the day the pair are often out, and the female may be seen removing soiled bedding and dragging in new. A pair of European lynx are probably among the more appealing larger mammals as far as the public are concerned. These are shortly to be given a commodious enclosure in contrast to the rather limited one they now

occupy. Adjacent to the lynx pen a large compound, landscaped with rock mounds planted with conifers, will house a pair of wolves. Other carnivores on display are red fox, arctic fox, ferret and polecat.

The main exhibition hall shows permanent displays centered around the theme 'Man and Nature' and illustrates by graphics and museum specimens how man has often worked against nature, especially in the way he manages the land. Traditional methods of cultivation are compared with modern methods of agriculture, and examples of farm implements and machinery are shown. Man's exploitation of animals such as the whale and endangered fur-bearing species is also illustrated. The hall is used as a meeting place for school parties as well as a venue for occasional external societies. Demonstrations of living animals and temporary exhibitions are also staged here.

A separate building exists for childrens' activities connected with visits to the Centre in which film shows and practical work take place. The room is equipped with working surfaces, lenses, microscopes and drawing materials. Sessions are organized by the museum education department covering aspects of animal behaviour based on animal groups seen at the Centre.

How is the Centre administered? The Keeper of Natural History decides what policy is to be followed, taking into account the opinions of the Nature Centre Working Party. A warden and assistant warden, both of whom are biology graduates, administer the Centre's daily running, but are responsible to the Keeper of Natural History. Their main duties are care of livestock, care and management of the sites natural and man-made features and their development, and public relations. They are also in charge of a work experience force of school leavers who carry out routine feeding and cleaning and provide much of the labour for development work such as landscaping and planting of animal enclosures. Since the scheme started in 1977 twenty five young people have gained from their experiences at the Centre. They have been given an opportunity to work closely with animals and to learn something of natural history. In return they have contributed significantly to the welfare and progress of the Centre in many ways. The security staff, working a shift system, are responsible for general security and care of grounds and buildings, and supervision of the public. In addition most of them undertake certain other duties including care of aquaria, painting bee-hives, and erection of fencing. In fact, before the work experience programme started we were highly dependent on the men's woodwill, and without them much of the manual work would not have been achieved. They are the first to admit that being involved in the Centre's development in this way breaks the monotony of routine duties and gives them real satisfaction. It should be added that one week-day closure enables the men to carry out these 'unofficial' duties unhampered by uniform patrol.

In the first two years of its life the Centre staged a number of week-end demonstrations and activities with a rural flavour. These included sheep-shearing, using Jacob sheep which were then kept, spinning and weaving their wool, corn dolly making, woodcrafts, beekeeping, ferreting, pond making and ploughing by a team of shire horses. A number of these activities are still shown at certain times of the year as part of the museum education's department's programme. Such events have undoubtedly helped to stimulate interest in country-based crafts and practices and this fulfills another of the Centre's aims.

The Birmingham Nature Centre has been, and will continue to be a success as long as there are people around to care for its welfare. During its four year's existence a total of 575,000 adults and school children have passed through the turnstile. This represents a daily average of between 575 and 655 over the same years. In 1976 the Centre was among the six runners-up in the Museum of the Year Award. We realise there have been failures, but there have been an enormous number of successes.

David Walker  
Birmingham Natural History Dept

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#### NATURAL HISTORY AT LUDLOW MUSEUM

The first proposal for a Museum in Ludlow is believed to have been made during the Napoleonic Wars. When Napoleon's brother, Lucien Bonaparte, was taken captive the Earl of Powis, in consequence of the King ordering that Ludlow or it's vicinity should be the abode of this distinguished prisoner, offered Dinham House as a temporary residence. Lucien lived there from December 1810 until June 1811 and during his enforced stay formed his own museum in the stables. On his departure from Ludlow Lucien left behind certain items which he hoped would form a nucleus for a town museum. A few years later it was suggested that the stable and barracks block of Ludlow Castle should be restored to house the museum, but nothing ever came of this, which is much to be regretted as it would have provided an ideal setting.

The actual founding of Ludlow Museum originated from a meeting held on the 12th October 1833, when the Ludlow Natural History Society came into being. In the printed notice of this meeting it was proposed "That there be a museum and library, illustrative of the various departments of science, for the use of members". It is interesting to see it also stated "That ladies be eligible to become members of