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The Cole Museum of Zoology: A brief history as it faces a new beginning

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Abstract

The Cole Museum of Zoology (REDCZ) at the University of Reading was founded in the early 20th century by Professor Francis Joseph Cole. Comparative animal anatomy is the principal scientific focus of the collection, represented by taxidermy, skeletons, histological preparations, fluid-preserved dissections, fossil material, casts, and some superb models of developmental stages. Overall, the collection contains over 3,200 fluid-preserved and dry specimens in addition to many hundreds of specimens in satellite collections used for teaching (approximately 38,000 specimens in total). More than 50% of the specimens are vertebrates, which reflects both Professor Cole's research interests and the need to illustrate a curriculum that was heavily focused on vertebrates. Cole was an important figure in early 20th century zoology and became a Fellow of the Royal Society of London. He was the driving force behind zoology at the University of Reading, and it is a testament to his vision that we still teach BSc Zoology using his collection. The museum is currently housed in its third home, but after just under 50 years in one spot, 2019 will see it moved to a new Health and Life Sciences building as an integral part of the entrance foyer. It is hoped that 2019 will herald a new era for the museum, beginning on the journey towards a 200 year history at the University.

Keywords: Francis Joseph Cole, University of Reading; REDCZ

Introduction to Francis Cole and overview of the collection

The Cole Museum of Zoology (REDCZ) at the University of Reading was founded in the early 20th century by Professor Francis Joseph Cole F. R. S. (1872 - 1959) (Figure 1). The exact date of this foundation depends on criteria applied. Many European museums have sketchy information on which to attribute their foundation, and dates may be deduced from the publication of the first catalogue or the birth or death of the founder (Cole, 1944). Ten years ago (in 2007) we celebrated the museum's centenary,

attributing the foundation to the date of Professor Cole's promotion to the Chair of Zoology at the University of Reading. However, with further consideration, it would be more accurate if the official foundation coincided with the first entry into the accession catalogue, in 1909.

By modern standards, Cole had an unusual route into academia. Although he started his working life as a journalist, Cole was passionate about zoology, attending classes and studying textbooks in his spare time (Franklin, 1960). In 1892, Cole was engaged as an



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apprentice under the supervision of James Cossar Ewart, Professor of Natural History at Edinburgh University (Franklin, 1960). Under Cossar Ewart's tutelage he produced a number of fish anatomy papers, including one on the nervous system of *Chimaera* Linnaeus, 1758 (Cole, 1896). Although he had no formal qualification, Cole's obvious academic aptitude, and years of tuition under a number of eminent Professors of zoology, won him a lectureship at Liverpool University College in 1894 (Eales, 1959). During the tenure of his lectureship, Cole pursued a BSc by research at Oxford, and his undergraduate research won him the Rolleston Memorial Prize for his work on the cranial nerves of *Chimaera* (Eales, 1959; Franklin, 1960). In 1906, Cole was appointed to a lectureship in zoology at University College, Reading (later the University of Reading), and in 1907 became the first occupant of the Chair of Zoology. Cole was dedicated to education, and passionate about teaching animal diversity and anatomy. He went on to win the Neill Gold Medal and Prize of the Royal Society of Edinburgh in 1908 for his work on myxinoid fish (hagfish) (Cole, 1926), and received his DSc from Oxford in 1910 (Franklin, 1960). In 1926, he was elected to the Fellowship of the Royal Society of London (Franklin, 1960).

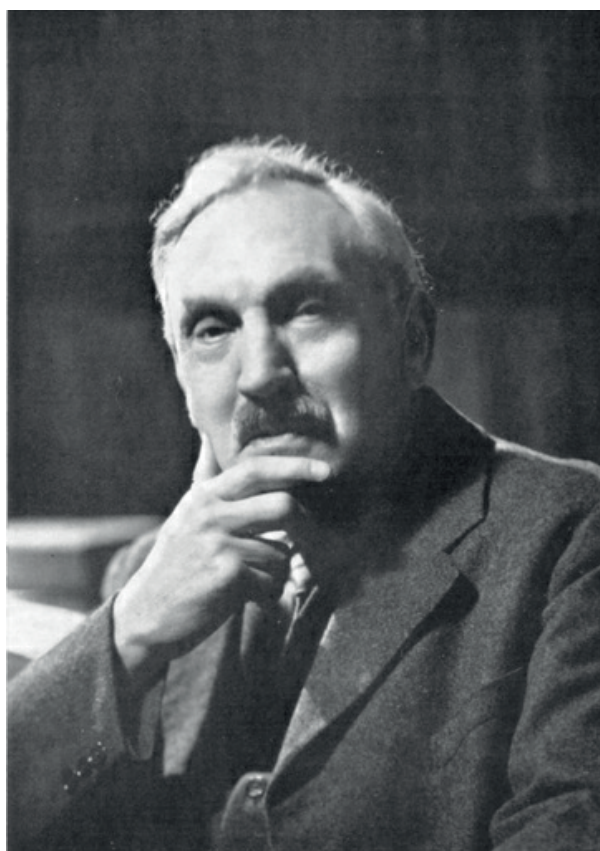


Figure 1. Professor Francis Cole. Image: Howard Coster.

Cole's museum was twice recognised nationally for its value, scientifically and historically. In 1939, on the occasion of Cole's retirement, the scientific journal *Nature* described the Cole Museum as "*being without a rival*" among its modern contemporaries (Anon., 1939). The University of Reading Council recognised Cole's contribution and resolved that "*the Zoological Museum, which is his creation, will remain as a permanent memorial of the professorship which he has held for thirty-three years in the University College and University of Reading*" (University of Reading Council, 1939). The Council further resolved that the Zoological Museum should henceforth be known as 'The Cole Zoological Museum' (Ibid.), although it has always since been referred to as The Cole Museum of Zoology.

In addition to his zoological collection, Cole, a lifetime bibliophile, assembled an impressive collection of books, which he used as sources when writing his own book on comparative anatomy (Cole, 1944). The Cole Library contains 8,000 works on anatomy and zoology, including many first editions bought by Cole from his own finances. Among the most prized of these volumes are: a first edition of Darwin's *Origin of Species* (1859), a first edition facsimile of Pliny's *Natural History* (1472), and a first edition of Linnaeus' *Systema Naturae* (1735). There are an estimated 1,700 or more pre-1851 works, including many continental books. The University bought the collection in 1959. It is housed in the University of Reading Special Collections archive and can be viewed by appointment.

Such was Cole's influence that, on the occasion of the 50th anniversary of Cole's arrival at Reading, *Nature* published another short piece on the Museum (Anon., 1956). The article praised the Museum, and went on to say that it was particularly important since the Museum of the Royal College of Surgeons, considered to be "*Reading's nearest parallel and exemplar*", had been severely damaged in WWII. It also described Cole's collection as one of the finest teaching museums in the country (Anon., 1956).

Long after his retirement in 1939, in March 1955 Cole entered into a memorandum fight with the University Council and new Head of Department, Professor Alistair Graham, over the interpretation of the statute that the Museum should "*remain as a permanent memorial of [his] professorship*" (Cole, 1955). Cole believed the statute meant that the museum should remain static, as he had left it, with every specimen on display in cabinets for students to view. Professor

Graham took a different view, and moved some specimens out of the display cabinets to make the museum more accessible. They were placed in an adjacent room, where they were still available to view, but to Cole this was no less than the destruction of the Museum. It is interesting that the 1956 *Nature* article was published around the time that this bitter argument occurred. The amount of detail on collecting given in the article, and the fact that it was written anonymously, does raise the question of whether someone wrote it at Cole's behest. Ultimately, Cole lost the argument, and he died only three years later.

Overview of the collection

Comparative anatomy is the principal scientific focus of the Cole Museum collection, represented by skeletons, histological preparations, fluid-preserved dissections, fossil material, casts, and some superb models of developmental stages executed in-house. The Museum is relatively small, with only 3,225 accessioned specimens, and is primarily a teaching collection stored in teaching laboratories, with around 400 specimens on display to the public. The Museum is housed in the School of Biological Sciences (SBS), and is still central to zoology teaching. Teaching is supported by a multitude of non-accessioned fluid-preserved specimens that are contemporary to the collection but are stored in jars that can easily be accessed for teaching. In addition to the Cole Museum, SBS has a number of zoological collections including an entomology collection, the Wise butterfly collection, a commissioned cabinet of insects of economic importance by photographer Harold Bastin, a large mollusc collection rescued from the Accrington Museum in Yorkshire, a small British bird egg collection, a skull collection, and the surviving fossil collection from the old Geology Department at the University. The School has an excellent zoological teaching slide collection, including many slides prepared by Professor Cole, which he donated to the cash-strapped zoology department on his arrival from the University of Liverpool. These are still used in teaching.

The accessioned collection contains more than 2,000 fluid-preserved specimens that are between 60 and 100 years old. These specimens are stored in various preservatives including alcohol, formaldehyde, paraffin, and glycerol, inside glass battery display jars with flat lids with different types of sealants, such as gelatine, silicone, and bitumen. Many of the fluid-preserved specimens are animal dissections,

including injections of blood vessels, lymphatics, and air sacs. The remainder of the collection are dry specimens, either air dried, taxidermy, fossil, models, bones or shells, etc. Dr David Tompsett (1910 - 1991) was a former student of Cole's who went on to work at the Museum of the Royal College of Surgeons. There, he developed a technique to produce resin casts of pulmonary vessels, and presented a number of these to the Cole Museum, including Marco resin casts of the pulmonary vessels and bronchi of a sheep, which are still used in teaching today (Anon, 1956; Alberti, 2013).

Collection and acquisition

Professor Cole began collecting zoological specimens after the University College had moved to the London Road site in Reading in 1907. At the time there were only a handful of students and the department was small, with only one lecture room, two laboratories, an office, and a workshop (Holt, 1977). Even by 1926, when the University received its charter, the museum and the degree was staffed by only Professor Cole, Dr Nellie Eales, and Mr Bill Stoneman (Padley, 1963). In 1909, Cole began the painstaking task of producing a catalogue of the museum specimens, all written by hand. The first entry is a relatively uninspiring larva of the wood leopard moth inside a cherry stem. It is not clear on what basis specimens were accessioned in the order that they appear in the register. Numbers 13-16 go from a sea urchin to a field vole, a spotted millipede, and the wonderfully unpleasant "*itch mite on a scaly leg*". Luckily, we have a richness of records from that period, with pre-accession catalogue notebooks and lists, notes on the purchase of material, and two types of card index (organised alphabetically and taxonomically). The handwritten accession catalogue is available online via the University Library collections catalogue, Enterprise. As well as containing detailed descriptions of specimens, the accession catalogue is, in places, illustrated with extremely detailed anatomical drawings to help with interpretation of the specimens (Figure 2). Unfortunately, there is often relatively poor information on the geographic origin of material and dates of collection, which limits the use of specimens in modern research. Cole was very much of the opinion that the collection was for zoological instruction, stating "*the function of our museum is a matter of much educational importance. It only has a minor and incidental connection with research ...*" (Cole, 1955).

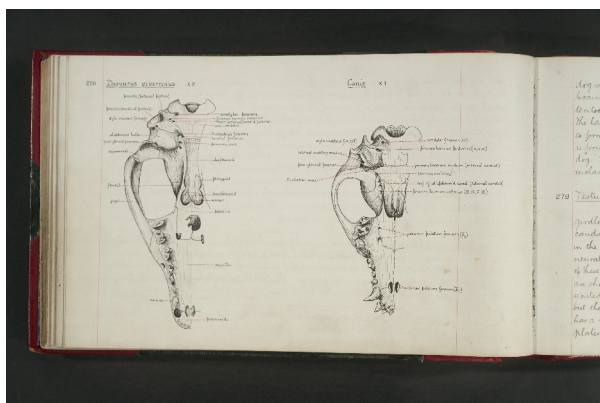


Figure 2. Sketch of specimen REDCZ-COLE278 *Dasyurus viverrinus* (Shaw, 1800) (Eastern Quoll) to compare the skull with that of a dog. Image: University of Reading.



Figure 3. Hyrax (*Procavia capensis* Huxley, 1869) from Janganyika (REDCZ-COLE3064), stuffed by Edward Gerrard & Sons, Taxidermists and donated by Eric Burt in 1930s. Image: Cole Museum of Zoology.

The museum has quite an eclectic mix of specimens from throughout the world, thanks to Cole's proactive methods of acquisition (preferably for free). Cole produced a bucket list of specimens according to his plans, and tasked his many friends to find them. African game wardens, visiting scientists, and zoologists worldwide were all asked to contribute, and specimens were donated by the Natural History Museum of London. Specimens were also donated by admirers, including a flying phalanger (*Petaurus* Shaw, 1791; REDCZ-COLE590) from the Australian government. Professor Isao Ijima, Director of the Misaki Marine Biological Station, University of Tokyo (1904 - 1921) donated many marine specimens to the Cole Museum, including two giant spider crabs (*Macrocheira kaempferi* (Temminck, 1836)); REDCZ-COLE648, REDCZ-COLE651) and a number of beautifully prepared sponges. He went to considerable trouble to help Cole, dredging the ocean no fewer than six times to finally acquire a *Metacrinus rotundus* Carpenter, 1885 sea lily (REDCZ-COLE819), a type of echinoderm (Anon., 1956). Cole was lucky to obtain an enormous *Python curtus* Schlegel, 1872 with 163 pairs of ribs (REDCZ-COLE1692) and an orangutan skeleton (REDCZ-COLE783) from Dr Hanitsch, a former director of the Raffles Museum in Singapore (Anon., 1956). An unnamed officer of an Antarctic whaling ship donated a series of specimens to illustrate the auditory organs of a rorqual whale (REDCZ-COLE3020).

In his memoirs, Fred Padley recorded that Cole frequently came back from visiting other universities with a specimen under his arm (Padley, 1963). Former students who had taken posts abroad were asked to collect and donate specimens of exotic animals, and

thanks to them the Cole Museum has lemurs and tenrecs from Mauritius (donated by Dr Scott Cowper), a manatee from Sierra Leone, and an African hyrax (*Procavia capensis* Huxley, 1869; REDCZ-COLE3064) (Figure 5), to name a few. Details of all the Cole specimens plus photographs of some specimens can be found online through the University of Reading library (Enterprise search <http://www.reading.ac.uk/library/>).

This approach to developing the museum continued beyond Cole's era. In 1951, Rex Cowper graduated from Reading with a degree in zoology and took up an appointment with the CSIRO Division of Fisheries in Tasmania. Before leaving the department, he promised Dr Nelly Eales that he would send the Cole Museum a specimen of the rare Australian Leafy Sea Dragon (*Phycodurus eques* (Günther, 1865)), if he was lucky enough to find one. 14 years later, a colleague of his, working in the Western Australian fishing port of Albany, was approached by tourists who had caught a strange fish whilst snorkelling; it was a Leafy Sea Dragon. Since many of Rex's colleagues knew of his long quest to find a Dragon, they knew immediately who to send it to, and Rex passed it on to Nelly at Reading. Until 2007, when in his 80s, Rex didn't know if his Dragon had survived the ravages of time - or indeed the journey to Reading - since he had no acknowledgement of receipt. Luckily, he was still receiving and reading the University of Reading alumni magazine, which featured the specimen on the front page to celebrate the centenary of the museum. He emailed immediately to say how thrilled he was to find that the Dragon was still in perfect condition and was on permanent display in the museum: "I'd almost forgotten what a beautiful creature



Figure 4. The leafy sea dragon *Phycodurus eques* (Günther, 1865) REDCZ-COLE3206. Image: Cole Museum of Zoology.

it was when I set eyes on it for the very first time more than 40 or so years ago" (Cowper, 2007). (Figure 4).

Specimens in early 20th century teaching

The Cole Museum display area is currently organised around taxonomy and animal diversity, and is still an important resource for undergraduate teaching. For Cole, the function of the museum was to supplement the lectures by "*awakening a more curious and scholarly interest in the subject*" (Cole, 1955). However, it does not cover the entirety of animal diversity: of the 32-35 animal phyla currently recognised (depending on the source you use), only 24 modern phyla are represented in the collection (Hejnol and Dunn, 2016). Some six modern phyla were only discovered and described after Cole retired, and specimens have not been acquired by any recent curators (Table 1). According to the 1933 BSc syllabus, animals were organised into 11 phyla, with the first comprising Protozoa (four accessioned specimens),

which are no longer considered to be closely related to multicellular animals. Molecular taxonomists have rearranged our understanding of animal relationships in the past 50 years, and no doubt will continue to do so. Since Cole's time, many animal groups have been elevated to phyla: e.g. the Phyla Sipuncula and Echiura were originally described as classes within Annulata, along with annelid worms. However, recent understanding has reverted some taxonomic groups back to the 1933 groupings recorded: Sipuncula and Echiura are now in the Phylum Annelida, along with annelid worms (Struck et al., 2007) (Table 1).

Phyla unrepresented in the Cole Museum are microscopic, and there are no microscope slides accessioned into the museum. However, one of our satellite collections holds some 25,000 slides, many of which were prepared by Cole himself. This collection is being catalogued by volunteers. The slide collection includes marine invertebrate larval specimens collected on zoology field courses in Port Erin, Isle of Man, by H. Chadwick. These specimens were used by W. Rogers, the laboratory technician, to prepare wax models for the museum (Anon., 1956).

As with the museum, in which 51% of the specimens are chordates (most of which are vertebrates), half of the microscope slides are of chordate material. Although chordates represent less than 5% of animal species on the planet, much of the teaching and research in Cole's era concentrated on this group.

Over 96% of the museum collection comprises animals from the so-called 'Big 9' (see Table 1), which represent the most speciose animal phyla, aligning to a curriculum based heavily on these animals. Indeed, the 1933 BSc Zoology syllabus was basically a list of animal phyla, orders, and families, with notes on which specimens to use and how to prepare them. Teaching would have been undertaken with non-accessioned specimens, and Cole was strongly of the opinion that his museum was not for use in class. He had a fairly romantic view of his collection, and went on to say that the museum "*adorns the nakedness of truth, and alleviates the harshness of instruction*" (Cole, 1955). This poetic view of the museum implies that lectures were rather dull. However, it is thanks to this approach that we have a wealth of specimens that are contemporary to the museum specimens. We do use his specimens in classes now, since the display museum is only a small percentage of the collection.

Table 1. List of animal phyla and number of specimens in the Cole Museum of Zoology and other collections held by the Museum (all numbers represent single items or containers and do not take number of specimens into account). In 1933, only 11 animal phyla were recognised in the syllabus (in bold). ¹Struck et al., 2007

Phylum	Cole	Other Collections	Total	Notes
Acanthocephala	7	0	7	Now thought to be in Phylum Rotifera. Listed in 1933 syllabus as a Class in Phylum Nematelminthes.
Annelida	107	63	170	One of the 'Big 9' phyla. Listed in 1933 syllabus as Class Chaetopoda in Phylum Annulata.
Arthropoda	578	4671	5249	One of the big 9.
Brachiopoda	32	311	343	Listed in 1933 syllabus as a Class in Phylum Molluscoidea.
Bryozoa	18	49	67	Listed in 1933 syllabus as a Class in Phylum Molluscoidea.
Chaetognatha	2	3	5	Listed in 1933 syllabus as a Class in Phylum Nematelminthes.
Chordata	1681	465	2146	One of the big 9.
Cnidaria	198	287	375	One of the big 9. Placed in Phylum Coelenterata .
Ctenophora	7	3	10	Not recognised as a Phylum in 1933. Placed in Phylum Coelenterata .
Cycliophora	0	0	0	None in collection, discovered in 1995. Microscopic.
Echinodermata	139	250	389	One of the big 9.
Echiura	3	0	3	Until very recently its own Phylum, but now a subphylum in Phylum Annelida ¹ . Referred to in the 1933 syllabus as Class Echiuroidea in Phylum Annulata.
Entoprocta	1	0	1	Listed in 1933 syllabus as a sub-class in Phylum Molluscoidea.
Gastrotricha	0	0	0	Microscopic. Listed in 1933 syllabus as a Class in Phylum Trochelminthes.
Gnathostomulida	0	0	0	None in collection, discovered in 1956.
Hemichordata	9	76	85	Listed in 1933 syllabus as a Class in Phylum Chordata.
Kinorhyncha	0	0	0	Microscopic.
Loricifera	0	0	0	None in collection, discovered in 1983.
Micrognathozoa	0	0	0	None in collection, discovered in 1994.
Mollusca	310	3874	4184	One of the big 9.
Nematoda	19	40	59	One of the big 9. Listed in 1933 syllabus as a Class in Phylum Nematelminthes.
Nematomorpha	1	0	1	Listed in 1933 syllabus as an Order Gordionidea in Phylum Nematelminthes.
Nemertea	14	4	18	Listed in 1933 syllabus as a Class Nemertinea in Phylum Nematelminthes.
Onychophora	8	0	8	Listed in 1933 syllabus as Class Onychophora in Phylum Arthropoda.
Orthonecida	0	0	0	Microscopic.
Placozoa	0	0	0	Described in 1971.

Platyhelminthes	63	37	100	One of the big 9.
Phoronida	2	6	8	Listed in 1933 syllabus as a query as to its status as phylum or class.
Porifera	77	141	218	One of the big 9.
Priapulida	1	0	1	Listed in 1935 syllabus as Class Priapuloidia in Phylum Annulata .
Rhombzoa	0	0	0	Microscopic parasite.
Rotifera	0	0	0	Listed in 1933 syllabus as a Class in Phylum Trochelminthes.
Sipuncula	6	5	11	Until very recently its own Phylum, but now a subphylum in Phylum Annelida ¹ . Listed in 1933 syllabus as Class Sipunculoidea in Phylum Annulata.
Tardigrada	0	0	0	Microscopic.
Xenoacoelomorpha	0	0	0	Formed from Xenoturbellida (described in 1946) and Acoelomorpha (described in 1949).
TOTAL	3286	10285	13571	

Maintaining the collection

For the first 50 years of its existence, the Cole Museum was run by technical staff who developed national expertise in specimen preparation and conservation. Former curator Bill Stoneman prepared transparencies of bones and cartilage, stained to show skeletal parts *in situ* (Figure 5). Laboratory technician Bill Rogers produced wax models of invertebrate larvae, and technician Fred Padley MBE published on making cheap glass covers for specimens, and on the mounting of wet specimens in the museum (Padley, 1933; 1935). When the museum moved with the zoology department from the London Road campus to a new, purpose-built home on the Whiteknights campus in the 1970s, the move was undertaken by the technical staff with help from students. As soon as the Spring term had finished on 18th March 1971, the task of moving the Cole Museum began. The elephant skeleton (REDCZ-COLE1150) was dismantled two days later. The elephant's spinal column, with its steel supporting bar, was carried on the shoulders of students up Redlands Road to the new building (Snowden, 2017). It took three months just to move the museum out of London Road, and time ran out before term began in the Autumn to think about reassembly. This resulted in the storage of the elephant and other skeletons on the roof of the building under quickly built shelters. Unfortunately, they remained there for a further two years and suffered somewhat from the weather (Snowden, 2017).

Staff had no conservation training, but did a fantastic job of reassembling the elephant from photographs. The skeleton had originally been articulated and displayed by driving spikes up the long bones of the legs; by the 1980s, the skeleton was listing and the spikes were beginning to push through the side of the leg bones. The chief technician, Edward Snowden, took it upon himself to dismantle the skeleton, and welded a tubular steel framework to suspend it and



Figure 5. Chameleon preparation REDCZ-COLE2962. Image: Cole Museum of Zoology.

take the weight off the legs (Snowden, 2017). Over the years, the ex-circus elephant, Norman, migrated from position to position - and even appeared on BBC TV for the Open University – but, gradually, the new cases and some of the specimens began to show their age. Some specimens migrated from the museum without records to track their location, some were stolen (including REDCZ-COLE1088, a manatee skull taken from the skeleton, and REDCZ-COLE1229, a whole tuatara skeleton from the display area (1990s and 1960s respectively)), some were damaged, and little effort was given to maintaining fluid-preserved specimens in storage if they were not used in teaching.

In 2003, a group of zoologists decided to take advantage of funding available from the Arts and Humanities Research Board (AHRB) and, together with funding from the Friends of the University of Reading, undertook a complete refurbishment of the cases. Dr Steve Hopkin, the curator at the time, redesigned the display in taxonomic order to show the diversity of the animal kingdom. In 2005, I took over from Steve as the academic curator of the collection. A conservation programme had already begun, to ensure that the display specimens were in good order. Specimens in storage were another matter. The fluid-preserved specimens were stored in an adequate outhouse, but many required a great deal of conservation. Many of the dry specimens were stacked haphazardly in unlocked cupboards in the foyer and labs, or in academic offices, for ease of use in teaching. Some were even on display in other Departments, following academics who had moved into new areas. My first task was to round up everything we could find and convince staff that they did not own specimens they habitually used in teaching or had 'borrowed'. This was followed by an audit, production of a digital catalogue, improved storage, and the writing of professional documentation.

With funding from the Higher Education Funding Council for England (HEFCE) under their Centres for Excellence in Teaching and Learning (CETL) programme and the Arts and Humanities Research Council, we launched several new projects within the Cole Museum, including a fluid specimen conservation project and an electronic guide to the Museum. Funding also allowed the development of new cases, and the training of technical staff who went on to train undergraduate students in the specialist techniques needed to maintain and restore a natural history collection. In 2010, the museum was

accredited by the Museums and Libraries Association, and in 2015 by Arts Council England.

Housing the Museum and the next 100 years

The Museum was originally based on the London Road campus of the University (Figure 6). After Cole's retirement in 1939, space was an issue. After a delay due to the outbreak of World War II, a new zoology building was completed at the London Road site, with basements that could double as air-raid shelters. The aforementioned 1956 *Nature* article on Professor Cole and his Museum noted that the Museum was housed in an inadequate building, stating that "*it is greatly to be hoped that on the new University site...*" (the Whiteknights campus purchased in 1946) "*...a worthy building will be planned*", and also that the University would make sure that it maintained "*what is a unique asset, not only for the University of Reading, but also for the entire country*" (Anon., 1956).



Figure 6. The Cole Museum at the London Road site. Image: Cole Museum of Zoology.

It was not until 1971, some 15 years later, that a new building was finally available to move the Museum. This building was built to house not only Zoology but also the new Physiology and Biochemistry department. With an eight-floor tower making it the highest building in the area, it was originally known as the PBZ Building, but since 1992, when the School of Animal and Microbial Sciences (AMS) was created, it has been known as the AMS building. AMS was amalgamated with Plant Sciences and Statistics in 2006 to create a large School of Biological Sciences. The AMS building, which has housed the Cole Museum for 46 years, was vacated by Biological Sciences in 2008, leaving only the teaching labs and Museum in place underneath a ghost tower. There were no existing plans to re-house the museum, which suddenly faced an uncertain and worrying future. The years ticked on and no plans emerged.

This isolation resulted in a blanket of peace descending (when school groups were not visiting), and our external visitor numbers rose, helped by social media and online advertising. This pause has been fortuitous. There has been a recent renewed interest in collections within the University, plus an acknowledged need for a new building for Biological Sciences. In the past few years, the University of Reading has developed Heritage and Creativity as one of its major research themes, and the collections (the University has many, including two other accredited museums) have a new value.

The next stage of the Museum's history has just begun. In 2019, the Cole Museum will move into a new building for Health and Life Sciences, in a section of the foyer specifically designed to house it. It will be an important element of the new building, forming the entrance to the laboratories and upper floors, and represents a significant investment by the University. It will be the 110th anniversary of the official start of the accession catalogue in 1909. I like to think that Professor Cole would be pleased to know that his collection is still valued and cared for, and will have a place in the future of the School and University. However, I suspect that he would not approve of my plans to put many specimens into storage in another building.

References

- Alberti, S., 2013. *Treasures from the museum*. [online] Available at: <<http://publishing.rcseng.ac.uk/doi/pdf/10.1308/003588413X13625648805604>>.
- Anon., 1939. News and Views: Prof F.J. Cole, F.R.S. *Nature*, 143, p.368.
- Anon., 1956. The Cole Museum of Zoology. *Nature*, 177, pp.555-556.
- Cole, F.J., 1896. On the cranial nerves of *Chimaera monstrosa* (L.1754); with a discussion of the lateral line system and of the morphology of the chorda tympani. *Transactions of the Royal Society of Edinburgh*, 38, pp.631-680.
- Cole, F.J., 1926. A monograph on the general morphology of the Myxinoid fishes, based on a study of Myxine. Part IV. The morphology of the vascular system. *Transactions of the Royal Society of Edinburgh*, 54, pp.309-342.
- Cole, F.J., 1944. *A history of comparative anatomy from Aristotle to the eighteenth century*. Edinburgh: Macmillan. [online] Available at: <<https://archive.org/details/in.ernet.dli.2015.218414>>.
- Cole, F.J., 1955. *The future of the museum of zoology*. Council minute 1728. Memorandum to University of Reading Council. [manuscript] University of Reading archives.
- Cowper, R. 2007. *Correspondence regarding leafy sea dragon Phycodurus eques accession number REDCZ-COLE3206*. [email] (Personal communication, 2007)
- University of Reading Council, 1939. *Council Minute 789*. [manuscript] University of Reading archives.
- Eales, N.B., 1959. Francis Joseph Cole, 1872 -1959. *Journal of the History of Medicine*, 14, pp.267-272.
- Franklin, K.J., 1960. Francis Joseph Cole, 1872-1959 *Biographical Memoires of the Fellows of the Royal Society*, 5, pp.37-47.
- Hejnal, A. and Dunn, C.J., 2016. Animal evolution: are phyla real? *Current Biology*, 26, R408-R431.
- Holt, J.C., 1977. *The University of Reading: the first fifty years*. Reading: Reading University Press.
- Padley, F.C., 1933. Paper-bound glass dust-covers for museum specimens. *The Museums Journal*, 33, pp.8-10.
- Padley, F.C., 1935. The mounting of wet specimens in the museum. *The Museums Journal*, 35, pp.294-300.
- Padley, F.C., 1963. *Recollections*. [unpublished manuscript] University of Reading archives.
- Snowden, E. 2017. Personal communication.
- Struck, T.H., Schult, N., Kusen, T., Hickman, E., Bleidorn, C., McHugh, D., and Halanych, K.M., 2007. Annelid phylogeny and the status of Sipuncula and Echiura. *BMC Evolutionary Biology*, 7, p.57.