

Notes to the Appendix

The 'Year' in column one is the imprint year on the first page of the concerned part (s).

In the fourth column, '1 l' signifies an unnumbered leaf (2 ll = 2 leaves).

Eggs

Michael Walters

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Eggs were something that had never particularly interested me until I came to work at The Natural History Museum (NHM). But when I joined the Museum staff, the then egg curator, Colin Harrison was far more interested in fossils, and was trying to find an assistant to pass the egg collection on to. The NHM egg collection was built up largely in the late nineteenth and early twentieth centuries. But parts of it date back before that. The original collection was on display in the public galleries, the eggs being glued to wooden boards. This collection was dismantled in 1837, and a system of registration or cataloguing begun. The eggs dating from before 1837, are almost all without information, and are termed the Old Collection. In view of the way they were treated a surprising number still survive. They include two Great Auk eggs, badly broken on the side where they were glued to the wood. Only one of these eggs is dated. It is a Gannet's egg collected on the Bass Rock, off Scotland, in 1807 and was probably collected by William Bullock who was on the Rock in that year. This is the oldest datable egg in the collection. A collection from Colonel Montagu, received in 1816, is probably of eighteenth century vintage, but none of the eggs are dated.

When I first came to the Museum in 1970, the birds were still housed in London, and much of my first two years were spent packing them up to be sent to Tring. But I was able to spend some time on eggs. In South Kensington, the eggs were stored in two separate locations owing to problems of space. The main series was in the basement of the Entomology block, while the overflow was in a separate area called the egg corridor.

The catalogue cards would be annotated either "Sy" to indicate that that clutch was in the systematic series, or "Eg" to indicate that it was in the egg corridor, which meant that it was not so easily accessible. The systematic series consisted of a series of mahogany cabinets, on top of which had been placed a similar series of cabinets of wood painted cream-colour, and the collections expanded upwards from the mahogany cabinets into the cream ones. Within these cabinets the eggs were laid out in glass-topped boxes of variable sizes. When the egg collection was moved to Tring, it was moved in the cabinets in the boxes.

[When we got the collection to Tring, it was stored temporarily in what is now the spirit area, the spirit collection hadn't yet been moved, partly because the dexian racking to accommodate it had not been installed. Each of the cabinets had to be lifted, placed on a light trolley and wheeled down

the link corridor and up the bumpy ramp to the egg area. Getting trolleys up this slope without the egg cabinet falling off, or the trolley running away from you, was not a science, but an art. Once the cabinets were safely in the egg area, the boxes were transferred to the standard Tring cabinets, which are in two sections. The contents of the mahogany cabinets going into the bottom halves, and the contents of the cream cabinets into the top halves].

The collection is world wide in its coverage, but is particularly rich in eggs from the Indian sub-continent; indeed it probably contains the finest collection in the world from this area. These include the huge collections of A.O. Hume and Stuart Baker, as well as those of many other Army officers and civil servants stationed there. The collection had been last completely catalogued in 1895, by Henry Seebohm who at the same time wrote a manuscript catalogue. This formed the basis of the published Catalogue of Eggs by Eugene Oates during the years 1902-1912. In the intervening years, a great many eggs had been added, either catalogued or un-catalogued. It was decided that I should go through the collection and do a total re-cataloguing. This was necessary because since Seebohm's time, nomenclature and taxonomy had changed a great deal, and many of the boxes were labelled with obsolete names. As well as card-indexing everything that had not already been catalogued, I also checked Seebohm's manuscript catalogue and Oates' Catalogue, and in a considerable number of cases extra information could be added from these catalogues to that which had previously noted as accompanying the eggs. Perhaps not surprisingly, a large number of eggs listed by Oates were not to be found in the collection, and more surprisingly, a considerable number of eggs listed by Seebohm were not listed by Oates. I found it astounding that in the space of a decade so many eggs could have disappeared or been discarded. Most lamentably, I discovered that there were a few instances (though happily not many) where the loss of eggs listed in Seebohm and/or Oates, meant that there are no eggs of that species currently in the collection.

I was actually taught very little about the egg collection and the catalogueing problems it presented. I learned this as I went along. It revealed to me that my predecessors Colin Harrison and the late Shane Parker had made quite a lot of errors through failure to correctly interpret data written on eggs. For example the collection numbers on the eggs in Tristram's collection consist of a number followed by a Greek letter. These refer to page numbers and egg numbers on the

page, in Tristram's own manuscript catalogue. This had not been realised. Many, but no means all of the eggs in Henry Seebohm's Collection had numbers of up to three digits followed by a dot and then another figure of one or two digits. They were all consistently written in the same hand. It was quite a long time before I discovered that these referred to the collection of Edward Hargitt, whose collection Seebohm had obtained and incorporated. Moreover, these referred to Hargitt's own manuscript catalogue and once again, quite often, extra information about the sets could be added by reference to this. This, again, was a point that my predecessors had not realised. So I started to check all the entries in Hargitt's catalogue as well, and found that a lot of eggs were not present in the collection, nor had they been listed by Seebohm. It transpired that many of the missing eggs had been used, before catalogueing, in the displays in the public galleries. Some of these eggs were recovered when the various public displays were dismantled and returned to the collection. These were of course, readily identifiable (to me, but they probably wouldn't have been to anyone else) by their Hargitt numbers. A lot of the Hargitt eggs were not recovered, and one must presume that they were lost on the various occasions when the public displays were broken into and eggs stolen. There are many other manuscript catalogues in the egg library which would repay a similar checking, but unfortunately, I never had the time to do this.

As well as re-catalogueing the main collection, I had to catalogue and incorporate many collections which came in over the years, and deal with a backlog of existing but unincorporated collections. Many of these had their own problems. The Davidson collection, for instance, had eggs identified only by a species number, a date and a locality all written in just about the worst writing I have ever encountered. James Davidson spent many years in the Indian forestry commission and was based in the area inland from Bombay though he made several expeditions to Kashmir. Over the years, I became used to his writing, and to the names of the localities he habitually frequented, so was able to decipher the names, but not always with a hundred per cent certainty, and a number have been appended with a query. The species numbers were either those of Hume or Oates, authors of the two main numerical species lists of Indian sub-continent birds. There is no way of knowing at the outset whether the number is a Hume number or an Oates number, but fortunately, the two are so distinctive that it is quite easy to tell by identification. In other words if you have eggs of what are obviously a bulbul, you will find that the number on the eggs refers in one list to a species of bulbul, but in the other list to something completely different. Of course you have to know your eggs! Davidson's colleague T.R. Bell also had eggs identified only by species numbers and by dates - no localities in this instance. Bell collected insects as well as birds eggs, and his detailed field diaries are held in the Entomology library in South Kensington. When working out his collection, it was necessary to type out a series of cards identifying the species, and indicating the date. I would then take a bundle of cards (enough to give me a day's work) up to the Entomology library and go through the Bell diaries looking for information. Having found a date, it was often necessary to read back several days or even weeks to find out where Bell

was at any particular time. Entries like "went nowhere" were singularly unhelpful. Bell, like Davidson, travelled from one forestry commission villa to another, inspecting timber and collecting as he went. He was the first to discover the nest of the Spotted Creeper *Salpornis* and all the eggs in our collection, though received from a number of collections, seem to have originated from Bell. Even when he is not credited as the collector, his neat writing on the eggs is quite distinctive.

One of the most controversial collections was that of E.C. Stuart Baker. He actually built up two collections, one of "Indian Eggs" and the other of "Cuckoo Eggs". The first of these covered former British India, the present day India, Pakistan, Bangladesh, Sri Lanka, Burma, Nepal, Sikkim, and the southern parts of Tibet. It was the most comprehensive egg collection ever assembled for this area. I can think of no species for the area for which the eggs are known, for which Baker did not have eggs. And there are species for which he had the only eggs known. The other collection, of Cuckoo's eggs, was scarcely less comprehensive. Needless to say it is based on the same area, where Baker spent most of his collecting life, but he also had eggs sent to him from other parts of the Old World—indeed everywhere where parasitic Cuckoos occur. He did not collect eggs of non-parasitic cuckoos. The problem with his collection is that his data is often suspect. His handwriting is difficult, but I got used to it. When I began to curate the Baker collection, I discovered that in lots of clutches there were single eggs which did not seem to match the rest of the clutch. The difference was subtle, but, when one had got used to it, distinctive. If you examined the writing on these eggs, sometimes one found that the date was slightly different from that on the rest of the clutch. But then again, sometimes one found the same anomaly on eggs which didn't perceptively differ from those of the rest of the clutch. The question was always: is this a genuine clerical error, or is it an attempt to deceive? Baker lived in an era when egg collecting and the buying and selling of eggs was perfectly legal and indeed big business. Large clutches were more collectable and therefore more valuable than smaller ones. The temptation in front of dealers (and Baker "dealt" in eggs in a BIG way) was to add eggs that sort-of matched to existing clutches to make them into larger ones. A story is told of Baker, though it may be apocryphal. A visitor called to see Baker one day and the door was answered by one of his children, who said "Oh Daddy's upstairs making up clutches". Like I said, I have no proof that this story's true, but it inevitably raised doubts as to Baker's integrity. There were a number of suggestions over the years, by, I think, Charles Vaurie—among others—that the Baker collection was so unreliable that it should be destroyed. But the Collection is so vast and so well written-up that it cannot be ignored. All one could do was to go through it with a tooth comb and note carefully every little thing that seemed to be doubtful, which is exactly what I did. Future workers must take it from there.

The Venning collection exhibits an example of potentially publishable data that has never been exploited. F.E.W. Venning worked mainly in Iraq, Pakistan and Burma, in which areas he was probably one of the most important collectors of all time. He was exceptionally meticulous. The collection was accompanied by detailed notebooks containing a wealth of data on each clutch, mainly relating to nest site and nest

construction, incubation, etc. I retired as curator of the egg collection in 2003, after 33 wonderful years.

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[Michael P. Walters was the Curator of the Egg Collection in The Natural History Museum (Tring, U.K.) for 33 years. This is a

greatly pared and edited version of a talk the author gave at a conference in Leiden, a couple of years ago. Here he has tried to restrict himself to what he said about eggs from the Indian subcontinent.]

Do Great Cormorants *Phalacrocorax carbo* displace other colonial nesting waterbirds at Kumarakom heronry (Kerala)?

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The 112 acre Kumarakom heronry (9°37'–93°8'N 76°25'–76°26'E) is situated in Kerala Tourism Development Corporation's 'tourist complex' of Kumarakom in Kottayam district, 14 km west of Kottayam town. The primary vegetation of the heronry consists of mangroves such as *Avicennia officinalis*, *Bruguiera gymnorrhiza*, *Rhizophora mucronata*, *Sonneratia caseolaris*, besides marshy mangrove associates, non-mangrove species, and hydrophytes (Ravi 2002). Some of the native vegetation was converted to plantations of coconut and rubber.

The discovery of two nests of Great Cormorant *Phalacrocorax carbo* at Kumarakom heronry on 18.v.2005 has increased the number of colonial nesting waterbirds at the site from ten (Narayanan 2004) to 11. During the current (2006) breeding season ten nests of Great Cormorants were located at the heronry and the number of birds increased from six (2005) to more than 25. The nests were found in a mangrove-associate, *Terminalia catappa*, at a height of about 12.2 m. Nesting of Great Cormorants at this heronry were first discovered by the second author (DVR) and later the third (NU) and fourth (SV) authors, successfully photographed the nesting birds. The location and height of their nests are similar to those of the Darter *Anhinga melanogaster* and Indian Shag *Phalacrocorax fuscicollis*, except that they are larger. Whenever Brahminy Kites *Haliastur indus* flew close to brooding birds, the latter produced 'threatening' postures and made high-pitched sounds. The vocalizations made by Great Cormorants are distinct, being buzzy and loud, and can be easily differentiated from those of other cormorants and darters. Narayanan (2004) did not spot any Great Cormorants at this heronry during the 2004 breeding season.

Great Cormorants are reported from Vembanad Lake and adjacent areas (Sreekumar 2003), but their status there varies from 'uncommon' to 'fairly common', according to the season. Neelakantan (1996) and Sashikumar & Palot (2002) reported that the Little Cormorant *Phalacrocorax niger* and Darter

populations in the Periyar Tiger Reserve declined due to the 'invasion' of and competition from Great Cormorants at the heronry. According to Narayanan (2004) 2.76% of the Darter's estimated world population is found in the Kumarakom heronry. Now, with the Great Cormorant nesting in Kumarakom heronry, it may compete with Indian Shag and Darter for nesting trees and other nesting 'requirements'. The selection of a nesting tree, height of the nest, and social factors influence nesting (Donzar et al. 1993). We wonder whether this will gradually lead to a reduction of Darters in the Vembanad and adjacent areas. Narayanan (2004) mentions about the Great Cormorant and its possible impact on the nesting of Darter population. But in the same instant we suspect that large colonies of nesting wetland birds attract other colonially nesting species such as Open-billed Stork *Anastomus oscitans* and Grey Heron *Ardea cinerea*, two large colonially nesting species, have started visiting Kumarakom heronry. It is possible that they will nest here in the future.

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