

Alauda

Revue
internationale
d'Ornithologie
Hors-série 87 (3) 2019



**10th
EBC
meeting** 

International Meeting of
European Bird Curators
17-19 october 2017 - Paris



10^e Congrès International des Conservateurs Européens de Collections
d'Oiseaux 17-19 octobre 2017 - Paris

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10th International Meeting of European Bird Curators

17-19 October 2017, PARIS



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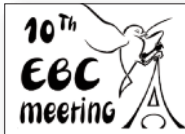


PRÉFACE

LE COMITÉ D'ORGANISATION

Jérôme FUCHS,
Christine LEFÈVRE,
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Patrick BOUSSÈS &
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Logo réalisé par
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(UMS 2700, MNHN)



Ce volume d'*Alauda* regroupe une partie des contributions scientifiques présentées dans le cadre du 10^e du Congrès international des curateurs européens de collections d'oiseaux, qui s'est tenu au Muséum national d'Histoire naturelle à Paris du 17 au 19 octobre 2017.

Les *International Meetings of European Bird Curators* sont des rendez-vous bi-annuels qui réunissent la communauté des conservateurs ou chargés de collections d'un grand nombre de musées européens mais également d'autres continents. Ces rencontres internationales permettent aux participants d'échanger sur différentes thématiques en lien avec la conservation des collections d'oiseaux, leur utilisation dans la recherche, la diffusion auprès du grand public, l'enseignement.

C'est la première fois que cette manifestation scientifique se tenait en France. Elle a réuni 69 participants venant de 19 pays : Allemagne (4), Autriche (2), Brésil (2), Canada (1), Danemark (2), Espagne (2), États-Unis (4), France (24), Hongrie (1), Israël (1), Italie (3), Norvège (1), République tchèque (1), Royaume-Uni (10), Russie (2), Serbie (1), Suède (3), Suisse (4), Turquie (1). Le programme scientifique comportait 31 communications orales et 12 posters, qui ont abordé les thèmes suivants : les collections d'importance historique dans les musées d'histoire naturelle, les techniques de préparation et de conservation des collections, les collections ostéologiques et leur utilisation, les « nouvelles » collections et leur utilisation, les bases de données et leur utilisation. Les organisateurs du Congrès souhaitent remercier pour leur soutien financier et logistique le Muséum national d'Histoire naturelle, et en particulier les UMR 7205 (Institut de systématique, évolution, biodiversité) et 7209 (Archéozoologie, archéobotanique : sociétés, pratiques et environnements), la Direction de la Recherche, de l'Expertise, de la Valorisation et de l'Enseignement, le LaBex BCDiv et l'Atelier d'iconographie scientifique de l'UMS 2700 (Outils et méthodes de la systématique intégrative). Ils remercient également pour leur contribution financière la Société des Amis du Muséum, l'Observatoire des Patrimoines de Sorbonne Université (OPUS), les entreprises ABIOTEC et Hygiène Office, spécialistes du contrôle des insectes dans les collections, ainsi que Alpha Visa Congrès pour son appui à l'organisation. ●

THEFT FROM THE NATURAL HISTORY MUSEUM'S BIRD COLLECTION - WHAT CAN WE LEARN?

Robert PRŶS-JONES, Mark ADAMS & Douglas RUSSELL

Abstract. During the past 100 years, the Natural History Museum has suffered three major specimen thefts from its bird research collections: the removal over many years and relabeling of specimens by Richard MEINERTZHAGEN during the early and mid 20th century, the major egg theft conducted by Mervyn SHORTHOUSE during the 1970s and the break-in and removal of just under 300 bird skins by Edwin RIST in 2009. These thefts were carried out in greatly varying manners and with widely differing apparent motivations. This paper explores these episodes, with the aim of providing museum bird curators with information useful for assessing and addressing the risks to their own collections.

Résumé. *Vols dans la collection d'oiseaux du Muséum d'Histoire naturelle : quelle leçon en tirer?* Au cours des 100 dernières années, le Muséum d'Histoire naturelle a été victime de trois vols majeurs de spécimens des collections d'oiseaux: le vol sur de nombreuses années et le ré-étiquetage de spécimens par Richard MEINERTZHAGEN au début et au milieu du XX^e siècle, le vol important d'œufs effectué par Mervyn SHORTHOUSE dans les années 1970 et l'effraction et le vol de presque 300 peaux d'oiseaux par Edwin RIST en 2009. Ces vols ont été effectués via des moyens très variés et avec des motivations différentes. Cet article explore ces épisodes, dans le but de fournir aux conservateurs de collections d'oiseaux des informations utiles pour évaluer et contrer les risques dans leurs propres collections.

Mots-clés: Vol, Natural History Museum, MEINERTZHAGEN, SHORTHOUSE, RIST.

Keywords: Theft, Natural History Museum, MEINERTZHAGEN, SHORTHOUSE, RIST.

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FOREWORD

This paper was originally delivered to the 7th European Bird Curators' conference in Florence in November 2011 and submitted to the planned proceedings volume, which unfortunately never materialised. It is now being published in the form in which it was written then, but it might be helpful for readers to know that during the intervening period a detailed book on the wider background to the theft by Edwin RIST has been published (JOHNSON, K.W. 2018, *The Feather Thief*. HUTCHINSON, London). A draft of the present paper was made available to the author of that book.

INTRODUCTION

Over the past 100 years the Natural History Museum (NHM) bird research collections are known to have suffered three major thefts of specimen material: first, skin specimens taken by Richard MEINERTZHAGEN over a period from ca 1918 to the 1950s; secondly, egg specimens taken by Mervyn SHORTHOUSE during the late 1970s; and thirdly, skin specimens taken by Edwin RIST in June 2009. These were three very different people, with motives and *modus operandi* that show some similarities but many more differences, and the details of their crimes have entered public consciousness to very varying extents. MEINERTZHAGEN was

a flamboyant and highly public figure, about whom a number of biographies have been written (LORD, 1970; COCKER, 1989, CAPSTICK 1998, GARFIELD 2007). His diverse spheres of interest were well captured by the phrase “soldier, scientist and spy”, the sub-title of the biography by COCKER (1989), and the copious evidence that he committed fraud across a wide array of his life’s activities has begun to be documented over the past twenty years (e.g. KNOX, 1993; LOCKMAN, 1995; RASMUSSEN & PRŶS-JONES, 2003; GARFIELD, 2007). By contrast, both SHORTHOUSE and RIST have far lower public profiles. Whereas the very recent occurrence of RIST’s theft, followed by his prosecution and conviction, means that details concerning him are readily available through a web search, any information regarding either SHORTHOUSE or his crime, which arguably had greater impact than that of either of the others, was never widely circulated and is now largely forgotten.

In this paper we intend to consider the lessons to be learnt from each of these thefts, with the aim of providing information relevant to the question “*What can we, as museum curators, do to make our collections safer?*” To do this we outline the key features of each of the three cases, highlighting when problems were recognised and what was done about them, and compare the cases to highlight similarities and differences between them. Throughout, the aim is to determine whether there are any common themes that can help guide curators’ future action in protecting the long-term integrity of bird research collections under their care. When not otherwise referenced, information presented is based on unpublished NHM archival documents.

As part of our review, we also put out a request on eBEAC, the electronic Bulletin board for European Avian Curators (SCHARLEMANN, 2003), to our curatorial colleagues for information on thefts from bird research collections elsewhere in Europe over the past half century. We are grateful to those who responded, but the amount of information received was insufficient to make a wider comparative analysis worthwhile. Not surprisingly, organisations can be hesitant to publicise such occurrences, but we believe that only by doing so can risks be more widely appreciated and appropriate preventative action more widely taken.

RICHARD MEINERTZHAGEN (RM)

Born in 1878 to a wealthy U.K. family, RM initially made his career in the military, including in the intelligence services, serving widely in the British Empire. He showed some interest in birds from childhood, probably largely influenced by having a potentially brilliant elder brother Dan, who was recognised as a rising ornithological star but died young (MEINERTZHAGEN, 1899; SHARPE 1906). He joined the army in 1897 and loved big game hunting, which he pursued in the late 1890s and early 1900s when his career took him to southern Asia and East Africa. However, he showed little evidence of focused interest in bird research before being posted to Mauritius in 1910, from which he produced his first serious ornithological paper (MEINERTZHAGEN, 1912).

Subsequently his bird research interest grew greatly, especially after he left the regular military after World War I, and he began mounting major collecting expeditions and making considerable use of various museum collections, notably that of NHM (then held in London) and, to a lesser extent, that of Lord ROTHSCCHILD in Tring. He was by this time an extremely well-connected person with a notable capacity to intimidate people.

From the start, his use of the NHM collections and library was contentious. By 1919 he had already been excluded for 18 months for unauthorised removal of bird specimens and it took the intervention of Lord ROTHSCCHILD to help get him readmitted. Museum documents spanning the next 30 years contain numerous references to suspicions by staff that he was stealing both specimen and library material: twice these reached the verge of prosecution. Although nothing was made public, in addition to NHM staff at least some senior ornithologists realised that something was amiss. There is correspondence from around 1940 making explicit reference to the stealing of specimens (RASMUSSEN & PRŶS-JONES 2003), but seemingly both NHM staff and others presumed this was a minor irregularity by a formidable person whom one would be ill-advised to cross without cast-iron evidence.

After an extended period of seriously poor relationships with senior NHM bird staff, notably

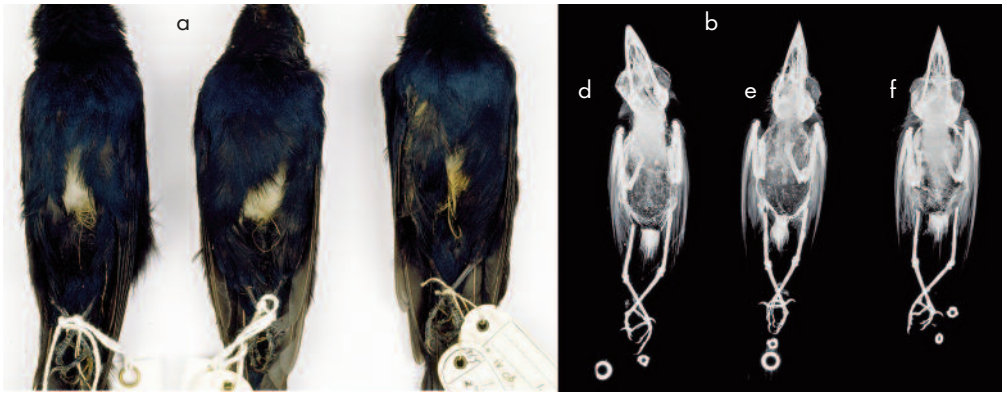


FIG. 1.— An example of RM theft and fraud: Photographic (a) and x-ray (b) images of three male Seychelles Paradise Flycatchers *Terpsiphone corvina* in the NHM bird collection. In both (a) and (b), the left and centre birds are RM specimens 1965.M.14923 and 1965.M.14922 respectively, whereas on the right is Nicoll specimen 1906.6.12.288. The physical make-up of each skin is essentially identical. Three males of this rare species were collected by Nicoll and registered into the NHM collection in 1906, but only one now remains. All available evidence suggests the two RM specimens are the missing Nicoll specimens 1906.6.12.287 and 1906.6.12.289, stolen and relabelled by RM to indicate that he himself had collected them in 1910. See RASMUSSEN & PRÛS-JONES (2003) for further information on this example.

*Un exemple d'un vol et d'une fraude perpétré par RM: Photographie (a) et rayon-x (b) de trois mâles de Tchitrec des Seychelles *Terpsiphone corvina* dans les collections du NHM. Dans les deux (a) et (b), les spécimens de gauche et du centre sont des spécimens de RM 1965.M.14923 et 1965.M.14922 respectivement, alors que le spécimen de droite est de Nicoll (906.6.12.288). L'apparence et la structure de la mise en peau sont globalement identiques. Trois mâles de cette espèce rare avaient été collectés par Nicoll et enregistrés dans les collections du NHM en 1906, mais seulement un seul de ces spécimens subsiste actuellement. Toutes les informations disponibles suggèrent que les deux spécimens de RM sont les deux spécimens manquants de Nicoll (1906.6.12.287 et 1906.6.12.289), volés et re-étiquetés par RM afin d'indiquer qu'il les a lui-même collecter en 1910. Voir RASMUSSEN & PRÛS-JONES (2003) pour plus de détails sur ce cas.*

Norman KINNEAR (who became NHM director), all was seemingly made up when Gavin DE BEER, a socially well-connected personal friend of RM, became NHM director in the early 1950s. Shortly thereafter RM presented his superb collection of 20,000 bird skins to the NHM, where he continued to work on them for another ten years or so, before becoming incapacitated and subsequently dying in 1967. Throughout the period RM used the NHM bird research collection, it was held in London (South Kensington), not being moved to its current location in Tring, on the site of Lord ROTHSCHILD's former museum, until the start of the 1970s.

The first published statement regarding probable theft of bird specimens by RM occurred only when, in a popular article on a visit he had made to the collection in Tring, PHILIP CLANCEY (1984) mentioned that, based in particular on

style of preparation, he considered the provenance of some RM specimens, notably certain redpolls and some southern African skins, to be highly suspicious. Arising out of his detailed taxonomic work on redpolls, Alan KNOX (1993) subsequently published an explicit and detailed accusation of theft and relabeling of NHM redpoll specimens by RM, based on evidence from both skin preparation style and otherwise unexplained absences of registered specimens.

KNOX's study left two key questions still needing answers. First, could his relatively subjective evidence based on preparation style be corroborated with independent, and hopefully more objective, evidence? Secondly, was the scale of theft by RM from the NHM bird collection relatively minor and/or restricted to particular taxonomic groups or was it more major and widespread? Since then, Pamela RASMUSSEN and Robert PRÛS-

JONES have devoted much time to trying to answer these questions. They developed the use of x-raying to provide independent evidence of skin make-up to corroborate, or otherwise, external appearance and have undertaken a large-scale analysis of well over 100 species, involving thousands of specimens, of his Asian birds, a major component of his collection.

The key conclusion relevant here is that theft and fraud, predominantly involving NHM specimens but those of other museums also, permeates RM's entire collection (FIG. 1). Potentially well in excess of 1,000 of RM's bird specimens are likely to have been stolen and relabelled with false data, with the totality of available evidence suggesting that deceit spanned the period from 1918 or earlier up to the 1950s. Nevertheless, RM was also a genuine collector who made important discoveries, and an array of criteria have been identified that users of the NHM collection can apply to elucidate the probability that the labelling of any particular RM specimen is genuine or not (*e.g.* see RASMUSSEN & PRŶS-JONES 2003). Furthermore, for a minority of specimens clearly stolen from the NHM, the techniques employed enable original data to be restored with a high level of confidence, mitigating at least some proportion of the damage done by RM.

MERVYN SHORHOUSE (MS)

While held in London prior to 1970, the NHM egg collection had been locked away and relatively little used in research for many years, with correspondingly limited effort devoted to its curation and the registration of newly-acquired material. When moved out to the Tring site in 1970-71, this collection was amalgamated with the substantial collection of bird eggs already present there that ROTHSCHILD had bequeathed at his death to the NHM. The combined egg collection was stored in unlocked cabinets at Tring and began to be subject to more focused curatorial attention motivated by an increasing appreciation of the potential research importance of egg collections, notably their central role in documenting the impact of organo-chlorine pesticides on birds of prey (*e.g.* RATCLIFFE 1970).

MS first came to the attention of NHM bird staff in October 1975 when, aged 32, he requested access to the egg collection. He claimed he had long been fascinated by eggs, had once been a collector and now, having suffered an industrial accident that had left him partially crippled and unable to work, wished to pursue their study. Although staff explicitly recognised that he was not someone who had a clear scientific purpose in terms of intended publication, it was decided to permit him to visit on compassionate grounds. During the remainder of 1975, he paid six visits in a wheelchair accompanied by a colleague who brought him.

In June 1976, two clutches of Moustached Warbler *Acrocephalus melanopogon* eggs were found to be missing, but with similar-looking eggs in their place. However, this was treated as an anomaly resulting from prior curatorial neglect and/or confusion caused by the move, rather than evidence of potential wrong-doing.

Having not visited since late 1975, MS was by late 1976 able to walk and, travelling by bus though still apparently disabled, started visiting the NHM egg collection again, paying 11 visits between late October 1976 and mid February 1977. In early December 1976, a research visitor reported that a clutch of Great Bustard *Otis tarda* eggs that he had studied a month previously was now missing. This time it was concluded that the clutch must have been stolen and the police were informed but, given that the cabinets were not locked, anyone who visited or worked in the museum was a potential suspect.

The police undertook to check out visitors to the egg collection during the previous month, who included MS, but failed to come up with any leads. At the same time, the NHM took various security measures, the most important of which was fitting locks to all 170 egg cabinets by mid February 1977. Subsequently, any visitor could in principle have been constrained to having access to only one or two cabinets at a time, but this cannot have been strictly applied in practise and certainly could not have involved detailed "before and after" checks.

During the 31 months between mid March 1977 and late October 1979, MS paid *ca* 75 visits to the NHM egg collection. In the summer of

FIG. 2.— An example of MS theft and fraud: (a) One of the few NHM clutches of Daurian Jackdaw *Corvus dauuricus* eggs (E/1902.10.15.553-6) was stolen by MS and replaced with this similarly-marked, but much less rare, clutch of what appears to be Eurasian Jackdaw *Corvus monedula* eggs. MS has erased the original NHM registration numbers (possibly E/1905.1.27.2062-5) and/or collector set marks from the *Corvus monedula* eggs and written on the *Corvus dauuricus* registration numbers on them. (b) A genuine clutch of four Daurian Jackdaw *Corvus dauuricus* eggs (NHM E/1902.2.24.179-182) for comparison, showing the typical arrangement and style of the original register numbers written on eggs in 1902. As MS did not have the same level of skill and/or experience of writing on eggs as the original collectors / curators, it has been possible to detect and record at least some of his attempts to forge original annotations.



Un exemple d'un vol et d'une fraude perpétrée par SM: (a) L'une des rares pontes de Choucas de Daourie Corvus dauuricus conservées au NHM (E/1902.10.15.553-6) a été volée par MS et remplacée par une ponte au dessin similaire, mais bien moins rare, de ce qu'il semble être des œufs de Choucas des tours Corvus monedula. MS a effacé le numéro de catalogue original du NHM (possiblement E/1905.1.27.2062-5) et/ou les inscriptions du collecteur des œufs de Corvus monedula et a écrit le numéro de catalogue de Corvus dauuricus sur eux. (b) Pour comparaison, une ponte de quatre œufs de Choucas de Daourie (NHM E/1902.2.24.179-182), montrant l'arrangement et le style typique des numéros de catalogue inscrits sur les œufs en 1902. Dans la mesure où MS n'avait pas les mêmes compétences et/ou expérience que le collecteur original ou les chargés de conservation pour écrire sur les œufs, il a été possible de détecter et d'enregistrer au moins certains de ses essais d'imiter des inscriptions d'origine.

1979 he acquired a car and thereafter used this rather than the bus when visiting. During this period, it was discovered that an array of additional egg material was missing, notably that of waders, birds-of-prey and petrels. It was established that at least some of these must have disappeared after the collection was moved to Tring, but it was presumed that these losses must have occurred before the cabinet locks were fitted and were only coming to light as relevant parts of the collection were being curated.

In late October 1979, boxes that had clearly been recently emptied of eggs were discovered on top of the cabinets and elsewhere, and it became clear that MS was the only likely suspect. The police were informed and a trap was set on his next visit, in early November 1979. Having

left the museum once at lunchtime, MS was stopped and searched when he left the museum to return to his car in the evening and 540 eggs were found in it and on him. When his home was searched the next day, ca 10,000 eggs were found. In order to steal eggs, he had made use of a large overcoat with specially prepared openings and tights which were cut open at the knee so eggs could be inserted.

Determining which of the 10,000 eggs belonged to the NHM proved complex because MS had systematically removed egg markings, as well as moving eggs around within the NHM collection and faking markings on them in order to cover his tracks (FIG. 2). He had also clearly been selling eggs to other collectors. At the end of April 1980, MS pleaded guilty to stealing 3,540

eggs, but denied stealing 10,000. This was accepted by the court and he was sentenced to two years in jail. At this time it further became apparent that he had an extensive criminal record, including house-breaking, and that his crippling accident had in fact resulted from his electrocution when attempting to steal pylon cable.

Based on a huge amount of curatorial investigation subsequently, it seems probable that MS may have stolen up to perhaps 15,000 eggs over the four years that he visited the NHM collection, but it is unlikely any precise figure will ever be ascertained. The theft is a major loss and will continue to cause problems in the curation of the NHM egg collection long into the future.

EDWIN RIST (ER)

On 24 June 2009 it was discovered that a window on the first floor of the building housing the great majority of the NHM bird skin collection had been smashed the previous night. This side of the building borders a secluded public footpath, being separated from it by a two-metre high wall, with barbed wire on top, roughly one metre distant from the building. The police attended and gave a preliminary assessment that no entry appeared to have been effected. All skin cabinets in the immediate vicinity of the broken window were then checked, as were locked cabinets (most skin cabinets do not have locks) that contained particularly important specimen material such as, for example extinct and endangered species, historic specimens collected by DARWIN, AUDUBON, *etc.* Nothing appeared to be missing and there were no signs that anyone had moved around in the building.

On 28 July 2009, just over a month later, a routine curatorial check of a cabinet containing Red-ruffed Fruitcrow *Pyroderus scutatus* specimens revealed most of them were missing. Immediate checks of other species with iridescent plumage revealed more missing specimens (FIG. 3). For some species, almost all specimens with iridescent plumage, *i.e.* males only in dimorphic species, were missing. Following a comprehensive check of all the roughly 1,500 bird skin cabinets covering three floors of the ornithology building, containing well in excess of 600,000 specimens, a

total of 299 skins of 16 species of cotinga, trogon, bird-of-paradise and bowerbird (TAB. I), all stored on the floor where the break-in occurred, were determined as missing.

It was rapidly apparent to curators, though less immediately to the police, that the reason for the theft was likely to be exotic fly-tying. The extraordinarily high value of feathers from such species for this purpose, as revealed by web checks, had not previously been appreciated by curators. At this point it appeared highly probable that all stolen specimens would be rapidly broken up. Despite detailed investigation by the police, no progress in solving the crime was apparent until July 2010 when the police requested details of any contact that ER might have had with the bird collection. As later became apparent, this was the result of a tip-off received by the police regarding on-line offers for sale by him of feathers from relevant species.

ER, an American student studying in London, had first contacted an NHM bird curator by e-mail in 2008, when he asked if he could visit to take photographs of certain bird-of-paradise skins on behalf of a friend, a student writing a dissertation on the group. He was asked to supply an e-mail address for his supposed friend so that this request could be verified. An e-mail address (personal, not academic) was supplied and confirmation seemingly received; ER had thereupon been admitted to the NHM bird skin collection for one day in November 2008, when he was present for approximately 2 hours. Only after his arrest was it demonstrated that ER had created his supposed friend's e-mail account and that it had in fact only been ER who had been in contact throughout.

By the time he fell under suspicion in July 2010 ER, who proved to be a talented music student studying in London as well as a fanatical fly-tier since he was a young teenager, was back in the USA for the summer. Following his return to the UK, his London accommodation was raided by the police in early November, numerous bird specimens and parts of specimens discovered and he was arrested. Police subsequently discovered from his computer files that he had been planning the theft from before he first contacted the NHM and that on the day of his November

FIG. 3.— Skins of some of the species, predominantly with iridescent plumage, that were stolen by ER in 2009 for use in fly-tying. From left to right: Red-ruffed Fruitcrow *Pyroderus scutatus*, Purple-breasted Cotinga *Cotinga cotinga*, Plum-throated Cotinga *Cotinga maynana*, Resplendent Quetzal *Pharomachrus mocinno*, King Bird-of-Paradise *Cicinnurus regius* and Superb Bird-of-Paradise *Lophorina superba*.

Spécimens de quelques espèces possédant principalement des plumages iridescents, qui ont été volés par ER afin de préparer des mouches de pêche. De gauche à droite Coracine ignite Pyroderus scutatus, Cotinga de Daubenton Cotinga cotinga, Cotinga des Maynas Cotinga maynana, Quetzal resplendissant Pharomachrus mocinno, Paradisier royal Cicinnurus regius et Paradisier superbe Lophorina superba.



2008 visit he had taken numerous photos both in and outside the museum to assist him in this.

After news of the arrest became public, a number of other data-less specimens and parts of specimens were returned by people in an array of different countries who had purchased them from ER. In total, of the 299 specimens stolen, 102 (34%) were recovered intact and with their original labels, a further 91 (30%) intact but without labels, but the remaining 106 (36%) were either not recovered or recovered in scientifically largely useless fragments (TAB. I), either as cut out sections of skin and feather or bags of loose feathers (FIG. 4). The overall impact on the NHM holdings of a few species was disproportionately serious.

ER first appeared in a magistrate's court in late November 2010 and then in the crown court in mid January 2011, when he pleaded guilty to the charge of theft. Sentencing was adjourned pen-

ding psychiatric reports. In early April 2011, ER was sentenced to 12 months imprisonment, suspended for two years, and was given a supervision order of 12 months. In not actually jailing him, the judge laid stress on defence submissions by experts who, since the theft took place, had diagnosed him as suffering from the obsessive-compulsive disorder, Asperger's syndrome.

At a further court hearing in late July 2011, ER was ordered under the Proceeds of Crime Act to pay back £125,150 after pleading guilty to money-laundering. This is the amount he was estimated to have made from selling stolen bird skins. Of this sum, police had determined that ER had £13,372 available to pay and he was ordered to do this or serve 12 months in jail. Should he come into more money in the future, the UK Economic Crime Unit will seek to recover it from him up to the total outstanding figure and may arrest him on any return he might make to the UK.



FIG. 4.— Some of the stolen Red-ruffed Fruitcrow *Pyroderus scutatus* material that police recovered from ER in 2010, including: intact study skin from which specimen data (specimen labels) have been removed; complete breast-plates removed from previously intact skins; bags of plucked breast feathers (either en mass or in small quantities ready for sale). In each case, the scientific utility of the material has been largely or entirely destroyed.

*Une partie des restes de spécimens de Coracine ignite *Pyroderus scutatus* que la police a saisi de ER en 2010, incluant une mise-en-peau entière pour laquelle les données associées (étiquettes) ont été enlevées, des poitrines complètes détachées de mises-en peaux auparavant intactes, des sachets de plumes arrachées (en vrac ou en petites quantités prêtes à la vente). Dans tous les cas, l'utilité scientifique de ces spécimens est fortement compromise, voire anéantie.*

DISCUSSION

A number of general conclusions can be drawn from these case histories. Whereas ER stole a few hundreds of specimens, RM probably stole thousands and MS almost certainly well in excess of ten thousand. Almost all specimens stolen by RM, most stolen by ER and probably a minority stolen by MS were received back by the NHM, but with their data highly compromised in all cases. Curatorial investigation into what data can be recovered is taking between many months (ER) and many years (RM and MS).

Although clearly obsessed by the use of feathers for fly-tying from an early age, ER's motive for theft

appears to have been largely or entirely financial gain, and this was seemingly also true of MS's egg theft. RM's motivation, however, was altogether more complex, being clearly not financial and probably mainly focused on academic prestige. RM's theft was entirely carried out pre-1970, when all the NHM collections were still in London, whereas both MS's and ER's thefts occurred after the 1970 move of the bird collections to Tring. RM, however, has been shown also to have stolen from ROTHSCHILD's bird collection in Tring prior to it being sold to the AMNH, New York, in the early 1930s (e.g. RASMUSSEN & PRYS-JONES 2003), as well as other collections. In this context, shortly before her death Miriam ROTHSCHILD (*pers. comm.*)

informed RP-J that her published account of thefts from the ROTHSCHILD collection supposedly made by a “Doctor Cyril CUNNINGHAM - an ‘ace’ collector” (ROTHSCHILD 1983, p. 181) in fact related to ones made by RM, whom she had not wished to name at the time, and that CUNNINGHAM is a fictitious name.

RM's and MS's thefts were carried out over long periods of time by people who had permission to study the relevant collections, whereas ER was admitted under false pretences for a single afternoon, when he clearly “cased the joint” prior to breaking in at night about six months subsequently. Of the two people admitted over a long period of time, MS was not undertaking scienti-

fic work, should never have been admitted in the first place and, in retrospect, left sufficient clues to have led to his detection sooner than the four years it took. By contrast, RM both had good scientific reasons to be present and did fall under considerable suspicion by both staff and other visitors. However, for an array of reasons seemingly linked in part to his social standing, he was not after 1920 excluded for any extended period. In total, he worked in the collection for well in excess of 30 years and nothing was proved against him until after his death.

At the time RM was working, checks kept on frequent, high status visitors like himself were minimal and he presumably removed specimens

TABLE I.— The fate of specimens stolen from the Natural History Museum bird collection by Edwin RIST in June 2009. *Le sort des spécimens volés par Edwin RIST dans la collection d'oiseaux du Natural History Museum en juin 2009.*

Species	Number of specimens missing July 2009	Specimens recovered from Edwin Rist's property 2010					Returned later by post		Total intact specimens recovered	Estimated total specimens recovered (whole or parts; from property & post)	Still outstanding*
		Intact specimen with label	Intact specimen without label	Total intact specimens	Approx no. of specimens represented by 'feathers' and 'skin fragments'	Total 'estimated' specimens with 'bags of feathers' included	Intact specimen without label	Approx no. of specimens represented by 'feathers' and 'skin fragments'			
<i>Haematoderus militaris</i>	2	0	1	1		1		1	1	1	
<i>Pyroderus scutatus</i>	47	4	9	13	24	37	5	3	18	45	2
<i>Cotinga amabilis</i>	14	0	9	9		9	1		10	10	4
<i>Cotinga ridgwayi</i>	3	2	2	4		4	2		6	6	(-3)
<i>Cotinga maynana</i>	13	11	1	12		12	2		14	14	(-1)
<i>Cotinga cotinga</i>	37	6	7	13		13	3		16	16	21
<i>Cotinga maculata</i>	10	6	3	9		9			9	9	1
<i>Cotinga cayana</i>	21	13	3	16		16	1		17	17	4
<i>Pharomachrus mocinno</i>	39	29	0	29	3	32			29	32	7
<i>Pharomachrus antisianus</i>	13	2	1	3		3			3	3	10
<i>Pharomachrus auriceps</i>	6	2	0	2		2			2	2	4
<i>Sericulus aureus</i>	17	0	9	9	1	10	3		12	13	4
<i>Ptiloris magnificus</i>	24	21	1	22		22	1		23	23	1
<i>Lophorina superba</i>	12	0	10	10	1	11			10	11	1
<i>Cicinnurus regius</i>	37	3	15	18	14	32	1		19	33	4
<i>Paradisea rudolphi</i>	4	3	1	4		4			4	4	0
	299	102	72	174		217	19		193	239	64

* For two species, the NHM received slightly more intact (but dataless) specimens back than were stolen. However, it is not at all straightforward to determine which were the stolen ones.

in a bag he could bring in with him. When MS began visiting the egg collection in Tring, there was limited visitor security and the egg cabinets had no locks to prevent easy access. Ironically, in London the egg collection had been little used for many years but had been kept in locked cabinets. Following the demonstration in late 1976 that a clutch of Great Bustard eggs had recently gone missing, closer track was kept of visitors entering the museum, bag searches on exit were introduced and locks were put on the egg cabinets so that access by visitors could be restricted as curators felt appropriate. However, as remains the case to this day, body searches could not be undertaken by museum staff.

Following ER's theft, a whole raft of new security measures was put in place, including putting bars on vulnerable windows and upgrading the existing, but then not comprehensive, intruder alarm systems. Twenty-four hour security on-site was already present, but has been enhanced. Furthermore, all research visitors now have to produce proof of both identity (e.g. passport) and address (e.g. utility bill) or, in the case of students, their academic supervisor's recommendation (on headed paper or from his/her academic e-mail address) before they can be admitted.

However, except for special collections (e.g. types, extinct and endangered species, key historic material and some other specimens of known high value), the volume of research visitors (the great majority of whom consult the skin collection) and their convenience in carrying out comparative research militate against placing all skin specimens under lock and key and available only by specific request to a curator. The NHM bird research collections are probably the largest (over one million specimens in total) and most heavily used in the world, being consulted by on average 383 visitors for 786 visitor days per year over the five-year period from April 2007 to March 2012 inclusive. All visitors and thousands of collections-related enquiries per year are serviced by five curatorial staff, who also must undertake everything else related to the curation, conservation and enhancement of the NHM bird research collections.

Major bird research collections elsewhere have made varying decisions in relation to the balance between access and security, e.g. Naturalis,

Leiden, prioritises security more stringently at the cost of less convenient access, and the NHM approach must clearly be subject to on-going cost-benefit analysis. Nevertheless, it must be recognised that research collections have no purpose unless they are used, and use will always carry risks. ●

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