Age of Extinction

Archives in an

Why Museums Matter

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Bulletin of the
For a while, the sternum of birds, because it could be easily extracted from the skinned carcass, had a certain vogue as an object of study. Early skeletal collections often contained a high proportion of these sternums, usually with the coracoids and acropatia still attached, and sometimes one may encounter an old skin in collections that still has the sternum tied to the legs or label. Comparative morphology of the sternum occupied the attention of several French ornithologists, and probably reached its zenith with L’Herminier’s (1827) classification of birds based on the morphology of the sternum. Nevertheless, this osteological diversion did little to further the development of avian skeletal collections. The description of new species and subspecies was the principal activity of museum ornithologists during all of the nineteenth and most of the twentieth centuries, and the study skin was the coin of the realm. As traditionally practised, preparation of a complete skeleton meant sacrificing the skin, and field collectors were extremely reluctant to bring back other than well-made study skins, a reluctance that continued through at least to the 1950s. As an example, in his long and distinguished career at the Smithsonian, Alexander Wetmore collected over 27,500 specimens, nearly 14,500 in Panama alone. Despite the fact that Wetmore was active in avian palaeontology, regularly used the Smithsonian skeleton collection, and was instrumental in the Institution’s purchase of large and important collections of skeletons, virtually all of the specimens he collected himself were prepared as skins only. The two decades when he was most active in the field marked the period of slowest growth in the Smithsonian skeleton collection in the twentieth century (C. Ludlow, Smithsonian computer files).

**History**

Serious examination of the avian skeleton can be traced back to the sixteenth century with Belon’s (1555) classic comparison of the skeleton of a raven (Fig 1) with that of *Homo sapiens*. Centuries would pass before the study was taken up again. Fird skeletons and fluid-preserved specimens were of particular interest to the British ornithologists William Jardine and Thomas Eyton. The correspondence of the celebrated John Gould (Sauer 1998–2001) contains numerous exchanges between these three gentlemen regarding the acquisition of such specimens, and Gould himself took care to obtain anatomical specimens of birds for his colleagues during his own explorations of Australia. Eyton’s researches are epitomised by his *Oeconomia Arvium* (1867–1875).

At the same time in France, Alphonse Milne-Edwards produces his monumental work on the fossil birds of France (1867–1871) in which there are many comparisons with (and illustrations of) the comparative osteology of modern birds. Likewise, skeletal anatomy received considerable attention in his classic work, with Granddier, on the avifauna of Madagascar, in which the skeletons of many different taxa were illustrated (Milne-Edwards & Granddier 1876–1881). At least some of Milne-Edwards’s collection still exists at the Paris Museum, although I am told that this material was discovered being stored in an alleyway.
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Although the majority of the specimens consists of dry bones in varying degrees of disarticulation, a smaller number are prepared as cleaned and painted skulls. These painted skulls are mainly used for exhibiting purposes and are stored in a different collection. The Smithsonian collections now hold nearly 4,000 painted skulls, which have been used in various studies of the evolutionary history of the genus Homo, as well as for educational purposes. The painted skulls are a major source of information for understanding the evolutionary history of the genus Homo, and they are an important resource for research into the origins and history of the human species.