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## The Vienna Bird Collection: History and Main Research Focus

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**Abstract.** The Vienna Bird Collection was officially founded in 1793, the oldest still extant specimens however dating back to about 1755-1775, including material from Captain Cook's voyages. Present holdings amount to 150,000 scientific objects, mostly study skins, mounts, skeletons, eggs and varia (spirit specimens, flat skins, micro slides and DNA-samples). Various sources of information on the collection as well as the main research focus past and present are documented in a selected bibliography.\*)

**Key words:** Natural History Museum Vienna, bird collection, history, bibliography

### 1. INTRODUCTION

The Vienna Bird Collection (Naturhistorisches Museum Wien, NMW) is numbered among the oldest still extant scientific collections of birds. Increasing public interest in the world's biodiversity, emerging from concerns for the preservation of endangered species, has recently led to a rather unexpected re-evaluation of museum collections. The importance of collecting and curating specimens as a basis for traditional as well as modern research, including aspects of ecology and molecular systematics, has been thoroughly discussed and linked with the necessity for world wide data availability. New research disciplines as well as a better understanding of population ecology have strengthened the demand for time series of study skins and enhanced the interest on historical collections and the verification of pertinent collection data.

### 2. HISTORY

In 1793 Emperor FRANZ II acquired a collection of mounted birds from Josef Natterer, retired imperial falconer, for his private museum of rarities („Naturalienkabinet“). After just a few years the collection already contained about 1,664 specimens (804 species) when the first still extant inventory was begun in 1806. The material received during this time includes (among others) name bearing types for LATHAM's and SHAW's descriptions of birds from James COOK's second and third voyages (1772-1780), which originally formed a part of the famous Leverian Museum. Birds purchased from various sources or collected on expeditions funded by the Imperial Court further enriched the collections (see Table 1) as well as the Imperial Menagerie in Schönbrunn, from whence many birds ultimately became part of the Vienna Bird Collection (SCHIFTER 1982, 1995, 1996).

Over the years many prominent collectors and scientists contributed bird skins to the ever growing collection, among them M.H.C. LICHTENSTEIN, C.J. TEMMINCK, R. BOWDLER SHARPE. Even after 1765, when Empress MARIA THERESIA changed the status of the museum from private imperial property to a federal public institution, the greatest part of the collections still remained in the Castle of Vienna, the so called „Hofburg“ and in the „Brazilian Museum“ (RIEDL-DORN 1998). Lack of space ultimately made a new representative building for the natural history collections an inevitable necessity and the present „Naturhistorisches Museum Wien“ was finally opened with great splendour in 1889.

Fortunately almost all of the material deposited at any time in the collection is still extant and during more than 200 years of existence only insignificant losses have occurred due to decay, fire or war times.

### 3. HOLDINGS

At present (1.1.2002) more than 150,000 scientific objects are housed in the Vienna Bird Collection, most of them study skins (95,000 specimens). Until the beginning of the 20th century the majority of the material was mounted, but between 1900-1950 many specimens were disassembled and incorporated in the study skin collection. Unfortunately this procedure was applied most indiscriminately, changing the overall appearance of historically valuable specimens (including some type specimens) and resulting at least in some cases in the loss of pertinent label data. About 10,000 specimens, many of historic interest, are still mounted, and 2,756 are on display in the public gallery. The egg collection consists of more than 10,000 clutches. The osteological collection of the

\*) Not printed due to shortage of space (Ed.).

**Table 1:** Historical development of the bird collection in the Natural History Museum Vienna with main collectors and collections.

Year	Collector	Locality	Remarks
<b>Period before 1806</b>			
?1755	? JAQUIN	America	„old collection“, before 1806
[1772-1775]	[COOK 2 <sup>nd</sup> voyage]	various loc.	acquired 1806
[1776-1780]	[COOK 3 <sup>rd</sup> voyage]	various loc.	acquired 1806
1783	MÄRTER & BOOS	America	before 1806
1785	BOOS & SCHOLL	S-Africa	before 1806
1793 antea	NATTERER sen.	Austria	acquired 1793
1793 antea (?)	Rev. KRATKY	Austria	before 1806 pro parte
1797 antea (?)	SPALOWSKY	various loc.	1811 pro parte
[1803]	[BAUER-FLINDERS]	Australia	acquired ?1803, 1826
1804	ENZEL	America	before 1806
[1804]	[BAUDIN]	Australia	acquired 1815
<b>1806 – First Inventory: 1,644 specimens</b>			
1817-1835	NATTERER coll.	Brazil	12,000 specimens
1839	HÜGEL coll.	Himalaya, Australia	1,400 specimens
1857-1859	NOVARA-EXP.	(global)	1,300 specimens
1877-1889	REISCHEK coll.	New Zealand	2,700 specimens
1893-1927	POLATZEK coll.	Palaearctic	1,500 specimens
1903	REISER	Brazil	1,347 specimens
1906	TSCHUSI coll.	Palaearctic	7,000 specimens
1910	GRAUER coll.	C-Africa	6,000 specimens
1912	REISER coll. (eggs)	Palaearctic	12,000 specimens
1925	Archduke FRANZ FERDINAND	(global)	2,000 specimens
1937	ZIMMER coll.	E-Africa	2,000 specimens
1957	SCHIEBEL coll.	Palaearctic	2,500 specimens
1986	SEILERN coll.	S-America	3,000 specimens
Smaller collections have been acquired from ALMASY, BOJER, BOUCARD, C.L. BREHM, DEPPE, DEGLAND, DUFRESNE, EMIN PASHA, FINSCH, v. HAAST, HEUGLIN, HOCHSTETTER, KOTSCHY, LICHTENSTEIN, MALHERBE, A.B. MEYER, PFEIFFER, POEPPIG, PRZEWALSKY, SALVIN, SCHIEDE, SCHILLINGER, SCHLÜTER, SCLATER, STOLICKA, SWINHÖE, TEMMINCK, UNDERWOOD, VERREAUX and many others.			

bird department holds about 8,000 specimens, mostly complete loose skeletons (about 25% part skeletons or skulls). Flat skins, anatomical and micro slide preparations (e.g. egg shells), nests and DNA-samples amount to about 20,000 objects. The scope of the collection is world wide, about 75% of the presently known bird taxa are represented by single specimens or smaller series.

#### 4. LOGISTICS

Holdings are arranged systematically following PETERS Check-list (1931-1987), using the subspecies level as organisational taxonomic unit. Revised label data for all specimens of the skeleton collection and mounts are available on a (department based) data-

base. About 80 % of the egg collection, but only a very small part of the study skin collection, have been entered on a card file index. Data of extinct or endangered taxa (according to IUCN criteria) are also available electronically (<http://www.specola.unifi.it/EVA.htm>).

About 80 % of the holdings are numerically catalogued in the bird department's inventory books. Main sources for information on collectors and the historical development of the collection are the acquisition entries, arranged chronologically from 1806 onwards („Acquisitionsbücher“), unfortunately not linked with the catalog numbers („Inventarnummern“), which were invented only about 1890 and follow no systematic or chronological order. A first list of type specimens, presently rather outdated, has been published by PELZELN & LORENZ (1886-1888), a revised and annotated type list will be available in the near future (SCHIFTER et al. 2003).

#### 5. RESEARCH FOCUS

Collection-based research is traditionally focussed mainly on taxonomy and faunistics, involving morphology, biogeography and the history of collections and collectors as well. Geographic areas especially well represented in the collection are the Palaearctic, parts of the Afrotropic, Neotropic (mostly Brazil) and New Zealand. Current projects include the re-evaluation of label data based on various historic sources as well as on technical aspects involving x-ray examination (fig. 1,2), neutron-radiography and spectrum analysis. Another field of special interest is the taxonomy and ecomorphology of birds of prey including DNA-analysis (in cooperation with the Research Group for Molecular Systematics at the NMW). Research in connection with nature conservation projects is (at least in part) also linked with museum collections and collecting data.





**Fig. 1:** *Volatinia jacarina splendens*. NMW 66.442 (relaxed mount), Insula St. Bartholomæi, acquired before 1806, collector unknown. The bird might originate from N.J.V. JAQUIN's voyage, who visited St. Bartholomé (in the Lesser Antillean Islands) between 1755-1757 and returned with „many exotic birds“ for the imperial aviary.

Foto: A. SCHUMACHER



**Fig. 2:** *Volatinia jacarina splendens*. NMW 66.442 (X-ray photograph). Wires and making of the specimen agree well with other examples in the Vienna bird collection mounted before 1790, but differ in many particulars from the techniques used during COOK's 2<sup>nd</sup> voyage (specimens from the Leverian Museum).

Foto: W. Reichmann

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