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## The collection of Maximilian, Prince of Wied, with particular reference to the type of *Falco tyrannus*

by Mary LeCroy, Christophe Gouraud & Steven van der Mije

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As a result of research into specimens collected by Maximilian, Prince of Wied (1782–1867), held in the Collection Baillon, Musée George Sand et de la Vallée Noire, La Châtre, France, one of us (CG) recently discovered that both the American Museum of Natural History (AMNH) and Naturalis Biodiversity Center, Leiden (RMNH) claim types of *Falco*

*tyrannus* Wied, 1820. The specimen in Leiden, a female, is reported to be the holotype (Hoek Ostende *et al.* 1997: 41), whereas the AMNH specimen is said to be the male lectotype (Greenway 1973: 270). We have researched both claims and the results of our investigations follow.

Wied's (1820: 360) description of *F. tyrannus* (now *Spizaetus tyrannus*, Black Hawk-Eagle) was based on a single male (holotype by monotypy) collected by him on the rio Belmonte (Jequitinhonha), southern Bahia, eastern Brazil, in 1815–17. Temminck (*in* Temminck & Laugier de Chartrouse 1821, Pl. 73 and accompanying text; see Dickinson 2001: 46 for use of the date 1821) depicted *F. tyrannus*, Wied, and acknowledged the Musée des Pays Bas (Leiden), Wied, and the Paris Museum at the end of his text, implying that he had seen specimens from Wied, among others. Later, Wied in his *Beiträge* (1830: 84–89) reiterated that he had collected a single male and mentioned that Temminck's plate did not match his specimen and might be a female or perhaps younger. However, Temminck (*in* Temminck & Laugier de Chartrouse 1820: footnote, Pl. 3; see Dickinson 2001: 46 for use of the date 1820) had earlier stated that '...to avoid useless repetition, specimens used for the plates are always housed in the first collection mentioned' [translated from French]. Thus, it is certain that Temminck used a Leiden specimen for the plate but that he had also either seen Wied's specimen and / or had access to his published description.

Hoek Ostende *et al.* (1997: 41) gave no details concerning Leiden's acquisition of the listed type, RMNH 87265, but Temminck frequently received specimens from Wied bearing Wied's manuscript name, which Temminck then illustrated in his *Planches*. In fact he sometimes anticipated Wied's description, using Wied's manuscript name, with credit to 'Pr. Max' before Wied had published it himself. This was usually a result of the long delay between Wied's travels in Brazil and publication of the *Beiträge* (1830). However, in the case of *F. tyrannus*, Wied had published the name in his *Reise* (1820), prior to Temminck's usage of it. Many of Wied's specimens used by Temminck remain in the Leiden collection, but there is no indication that the Naturalis specimen of *F. tyrannus* came from Wied. Checking the extensive correspondence between Temminck and Wied revealed no information concerning this specimen. Furthermore the only clue leading to a connection with Wied is a reference to Wied's travels ('Voy. de Wied') on the bottom of the stand of the specimen thought to be the type of *F. tyrannus*. However, this writing is not in Temminck's hand and is clearly a later addition, probably by Schlegel when he was compiling his catalogue of the Leiden bird collection (Schlegel 1873) in which he described the specimen as from the Wied collection. Given also that this is a juvenile female and that Wied mentioned that it differed from his specimen, the Naturalis example cannot be the holotype of Wied's *F. tyrannus*. It is possible that Temminck studied Wied's specimen during one of his visits to the Wied collection or that he received it on loan and returned the specimen.

The supposed type in AMNH, no. 6381, was first listed as such by Allen (1889: 267), who noted that the specimen had no original label. In fact, it has no label at all except the type label added by Allen. Greenway (1973: 270) made the incorrect assumption that Allen, by listing the specimen as the type, had designated it the lectotype. This did not appear to be Allen's intent; he frequently listed several 'types' (= syntypes) when AMNH had more than one specimen that he identified with Wied's scientific name. Allen's work was careful and thorough, and he was aware that not all types of names introduced by Wied were at AMNH, but thought that their lack was simply a result of the passage of time since the specimens had been collected. Allen was unaware, for example, that Wied had given apparently appreciable numbers of specimens from his collection to others; these have ended up today in collections such as Wiesbaden (Hoffman & Geller-Grimm 2013), Leiden, and Collection Baillon (Gouraud *in press*).

Relevant to the present case, Allen (1889: 212) was aware of Temminck's publication of some of Wied's manuscript names and noted that 'It thus happens that quite a number of the specimens figured in the 'Planche[s] coloriées' are now in our Museum collection.' Allen also lacked lists of types in other museums for reference.

It is further relevant to consider the history of the Maximilian Collection at AMNH. Since its purchase, it has been referred to at AMNH as the Maximilian Collection, notwithstanding that when the Prince is the author of a name, that name is always credited to 'Wied' by the entire ornithological community. Two years before Wied died in 1867, he prepared a handwritten catalogue of his collection. As Allen (1889: 209) said: 'This is of great importance as indicating his latest views respecting the status and nomenclature of his own species. It is unfortunate, however, that his specimens were not numbered, so as to clearly identify each with the entry in the Catalogue, and that the localities where they were obtained were not explicitly stated.' In his catalogue, names that Wied introduced are usually listed under the name that he considered the most appropriate in 1865, with his introduced name followed by 'Wied'. If he collected the species in Brazil, this is usually indicated by 'm. R.' [meine Reise]. This catalogue (Wied 1865) has been posted on the internet by the AMNH Library, where the original is housed. In his catalogue (p. 227) Wied entered his *F. tyrannus* under the genus *Spizaetus* Vieillot, preceded by '?'; this indicates only that he questioned its inclusion in *Spizaetus*. Although Allen worked carefully with this catalogue, despite the difficulty of doing so, he found that it was not a complete record of Wied's collection and that in a few cases a species was entered twice under different generic names 'widely separated in his system of classification' (Allen 1889: 210). It should be used with great care.

To understand the background to the specimens with which Allen worked, it is necessary to investigate the early ornithological history of AMNH. The following details are mostly from an unpublished memoir held in the AMNH Library, written by Elliot in 1915 and published in part in the *American Museum Journal* (Anon. 1915: 133–141) on the occasion of Elliot's 80th birthday, from Allen (1889: 209–212, 1916: 33–36), and from early annual reports of the museum, especially that by Blodgett (1870). The AMNH was founded in 1869 and set about acquiring foundation collections of birds. The first was that of New York resident Daniel Giraud Elliot, who had an important private collection of mostly North American birds and who was known for his scientific expertise. He had traveled widely and was acquainted with the scientific community worldwide. At this time he was planning an extended European trip to study in various museums abroad and was concerned about having to store his collection while he was away. Prof. Albert S. Bickmore, one of the founders of AMNH, suggested that he should make it available to the new museum. 'After a few weeks I decided that rather than risk the collection in one of the store houses in town, where it would be liable to be ruined by dust or moths and in danger of total loss by fire, I would dispose of it to the Museum, which was done, the Trustees gladly availing themselves of the opportunity to secure it; and it was the first material of any kind that the Museum had obtained and really formed the nucleus of the present gigantic institution.' The specimens were then mounted for display and placed on 'turned mahogany' stands by J. G. Bell, a well-known taxidermist in New York city. Elliot was then asked to select specimens for AMNH from collections at that time available for sale in Europe. Two of these contained South American specimens and will be discussed here.

The Maximilian, Prince of Wied, Collection was, in 1869 (two years after Wied's death), for sale by his nephew. In his memoir, Elliot recounted his visit to the Wied palace, where the collection was stored, and commented on the generally good condition of the specimens. He purchased the entire collection then in the possession of the family and had

it 'boxed up and sent to New York.' The collection consisted of some 4,000 mounted birds, as well as other animals, and with it came the catalogue mentioned above.

Elliot next visited Paris, where he selected from the collection of Maison Verreaux. The Verreaux brothers had collected widely and some of their material had gone to the Paris museum, including type specimens, but they also had a large commercial establishment through which they sold specimens (Mearns & Mearns 1992: 470–473). Elliot recounted: 'For several months I passed almost every day going through that collection. As rapidly as I selected birds or mammals as the case might be they were mounted by Ver[r]eaux and shipped to New York. In this way several thousand specimens were obtained, all of which had been properly named according to the nomenclature then accepted, and on their arrival in New York in huge boxes were arranged by Mr. Bickmore.' With this collection came a large catalogue, apparently of the species in the Verreaux Collection, with specimens selected by Elliot marked as to their number and sex.

When all of these specimens had been received, they were to have been put on exhibit, as was the custom of the day. However, the AMNH had no building in which to display them. The first few annual reports document permission given by the Parks Department for the museum to store these specimens in the Arsenal building at 64th Street and Fifth Avenue. Later, space was allotted on the top two floors of the same building to display the specimens to the public. In 1877, the first AMNH building was finished and the specimens were then moved to the new building and put on exhibit. Also during this time the original T-shaped stands of the Wied specimens and the white stands of the Verreaux specimens were replaced by 'turned mahogany' perches '...the labels being carefully removed from the old stands and tacked on the bottoms of the new stands. In a few instances transpositions of labels occurred, but they were generally of such a character as to be easily rectified' (Allen 1889: 210). It was during this period, prior to Allen's arrival in New York, that Elliot made one of his brief returns to the city and was appalled by the carelessness with which the early collections were treated, which he attributed to the lack of scientific staff in the early days of AMNH, and he felt that many valuable specimens had been lost or discarded.

In the annual report for 1883 it was noted that Edgar Mearns made a large donation of study skins of North American and European birds that were to remain unmounted. He was also hired to identify and catalogue the Eurasian birds in the AMNH collection. He began by separating the mounted birds from the study collection and cataloguing them in separate volumes. He completed this work at the end of January 1884.

It was not until 1885 that Joel Asaph Allen was appointed Curator of birds and mammals and began the task of bringing order to the burgeoning collections. To do this, he combined the remaining early collections of mounted birds and arranged them systematically; then they were catalogued together. Regarding the Maximilian Collection, Allen (1889: 209–211) found that in the *Reise* and *Beiträge* 'about 160 species [were] described and named as new, of which about three-fourths are still represented in the Maximilian Collection by the original or 'type' specimens. Whether the others were lost prior to the transference of the collection to New York, or since that time, it is impossible to determine; yet it seems evident that in a few instances the types were either not preserved or were lost before the reception of the collection in this country.' The types that Allen (1889, 1891) found were 'dismounted and transferred to cabinets, thus preserving them from further deterioration'.

In the AMNH catalogue of mounted birds, there are three specimens of *Spizaetus tyrannus* listed: AMNH 6380, unsexed, from the Verreaux Collection and marked as dismounted for the study collection; AMNH 6381, unsexed, entered as from the Maximilian Collection but not otherwise marked; and AMNH 6382, female, from the Verreaux Collection but not otherwise marked. AMNH 6380 has not been found in the study collection. AMNH 6381 is

a formerly mounted specimen lacking any label; it was dismounted by Allen and put with types. AMNH 6382, still mounted, was found among the mounted specimens. It bears a small label attached to its leg with catalogue no. 6382, a printed exhibit label with the no. 6380, changed in ink to 6382, and 'Verreaux Coll.'. The original Verreaux label (no. 45047, ♀, Brésil) is pasted to the bottom of the 'turned mahogany' mount on which the specimen sits.

According to the Verreaux Collection catalogue, Elliot selected three specimens, an adult male, an adult female and an immature. It seems entirely possible that all three specimens at AMNH were from the Verreaux Collection and that one has lost its label. The method of preparation of AMNH 6381 appeared to Allen similar to that of other Wied specimens, but specimens of both collections were mounted in Europe and were probably not dissimilar. It had also been remounted on a 'turned mahogany' stand and had lost the identity that the Wied 'T-shaped' or Verreaux 'white' stands would have provided. Allen assumed that the specimen without a label must be the missing Wied specimen and therefore a male, as Wied had a single male specimen. (The sexes differ only slightly in size.) But because only one of the three specimens obtained from Maison Verreaux can now be found and because one of the three specimens catalogued has no label of any sort, it seems impossible to confirm that the specimen claimed by Allen is the type of *F. tyrannus*.

We must conclude that lacking any connection to Wied's collection the Naturalis specimen of *Falco tyrannus* is not the holotype. The lack of conclusive information concerning the AMNH bird also makes it impossible to fix type status on this specimen. Furthermore, the lectotype designation by Greenway does not follow the *Code* (ICZN 1999), since a lectotype can only be designated from a type series. In this case we have a description referring to a single specimen, so there is no type series.

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## On the juvenile plumage of Spot-tailed Nightjar *Hydropsalis maculicaudus*

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Spot-tailed Nightjar *Hydropsalis maculicaudus* occurs patchily from south-east Mexico to the Guianas, northern Brazil to south-east Peru, north and east Bolivia, eastern Paraguay and south-east Brazil (Cleere 1998, 1999). Its natural history is poorly known (Cleere 1998, Ojeda *et al.* 2014). Cleere (1998) described immature and juvenile plumages as similar to that of the adult female, but with all primaries and secondaries narrowly tipped pale buffish. Here, we provide a detailed description of the species' juvenile plumage.

Between October 2010 and May 2014, we undertook nocturnal surveys from dirt roads at Santa Alejandrina marsh, Minatitlan municipality, Veracruz, Mexico. When caprimulgids were detected by their eyeshine, we turned off the vehicle engine and trapped the birds using a portable round net (CAPERLAN 4×4 240). Birds were banded, aged and sexed, and if possible measured before being released. For ageing, moult criteria and colour contrast were used, as well as descriptions of typical moult strategy (Pyle 1997, Cleere 1998); for sexing, plumage criteria were mainly used. Caprimulgids encountered were Lesser Nighthawk *Chordeiles acutipennis*, Common Nighthawk *C. minor*, Pauraque *Nyctidromus albicollis*, Chuck-will's-widow *Antrostomus carolinensis*, Eastern Whip-poor-will *A. vociferus* and Spot-tailed Nightjar *Hydropsalis maculicaudus*. On 30 May 2014, we trapped two juveniles of the last-named species.

### Juvenile plumage

The following characters were noted in both individuals. Forehead and crown blackish slightly spotted buff or tawny. Nape blackish brown, spotted or barred tawny and cinnamon-buff. Loes and ear-coverts tawny and cinnamon-rufous speckled dark brown (Fig. 1). Beige supercilium, pale malar stripe, throat paler than in adult, chest coarsely mottled cinnamon to buff or tawny. Reddish-cinnamon hindcollar slightly indicated (obvious in adults). Upperparts paler grey-brown, cryptically vermiculated dark brown, with buff-white or tawny spots (lacking adult's distinctive buffy scapular 'V'; Fig. 1). Rump and underparts buffy, barred blackish brown. Wing-coverts barred brown-cinnamon and black, forming