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## The type specimens, type localities and nomenclature of *Sarcoramphus* vultures (Aves: Cathartidae), with a note on their speciation

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### Abstract

A nomenclatural review of *Sarcoramphus* vultures resulted in the following: The genus *Sarcoramphus* was described by Duméril in 1805 rather than 1806. *Vultur papa* Linnaeus, 1758, is the type of *Sarcoramphus* by subsequent monotypy (Froriep in Duméril 1806), not by Vigors's (1825) designation. The type of the genus *Gypagus* Vieillot, 1816, is, by monotypy, *Vultur gryphus* Linnaeus, 1758, not *Vultur papa* Linnaeus, 1758. Due to this, *Gypagus* is a junior objective synonym of *Vultur* Linnaeus, 1758. *Gyparchus* was created by Gloger (1841) as a new genus for *Vultur papa* Linnaeus, 1758, not as an emendation of *Gypagus* Vieillot, 1816. *Vultur papa* Linnaeus, 1758 was found to be possibly based on syntypes from two different taxa and a lectotype is here designated. The author of *Vultur sacer* is Zimmermann (in Bartram 1793), not Cassin (1853). Possible speciation events in the genus *Sarcoramphus* are also discussed.

**Key words:** *Sarcoramphus papa*, *Sarcoramphus sacer*, nomenclature, speciation

### Introduction

The genus *Sarcoramphus* Duméril (see below for its date) has long been treated as monotypic, consisting of a single species, *Sarcoramphus papa* (Linnaeus 1758: 86), the King Vulture (Houston 1994; Ferguson-Lees & Christie 2001; Dickinson & Renssen 2013). Recently, Snyder and Fry (2013) recognized a second, extinct species from the southeastern United States, which they called *Sarcoramphus sacra* (or *sacer*; see below for its authorship and the ending of the specific name). I observed that due to their action the type series upon which Linnaeus (1758) based his *papa* became composite, which prompted me to revise the nomenclature of and address related issues concerning *Sarcoramphus* vultures.

Nomenclatural decisions follow the International Code of Zoological Nomenclature (ICZN 1999; hereafter the Code). For current bird taxonomy, we follow Dickinson & Renssen (2013).

### *Sarcoramphus* Duméril

This genus was described by André Marie Constant Duméril (1774–1860) in his *Zoologie Analytique*, dated in standard reference books from 1806 (e.g., Hellmayr & Conover 1949: 3; Blake 1977: 263; Stresemann & Amadon 1979: 278; Dickinson 2003: 93). However, Duméril's book went through two printings, and although both bear the date 1806 on their title-pages, the first printing was published in 1805 (Bour 2010; Gregory 2010; Gregory & Dickinson 2011). The generic name *Sarcoramphus* thus dates from 1805 rather than 1806 (see also Dickinson & Renssen 2013: 233).

The type species of *Sarcoramphus* has been given either as *Vultur gryphus* Linnaeus (1758: 86) (e.g., G.R. Gray 1840: 1; Sharpe 1874: 20) or as *Vultur papa* Linnaeus (1758: 86) (e.g., Allen 1907: 38; Stresemann & Amadon 1979: 278; Dickinson & Renssen 2013: 233), which requires clarification.

Duméril (1805: 32) created the genus *Sarcoramphus* without included nominal species. Humboldt (1805: 31; for a German translation see Humboldt 1806: 136) included *cuntur* Duméril in *Sarcoramphus* and this species would be the type of *Sarcoramphus* by subsequent monotypy (Art. 69.3 of the Code) if *cuntur* were available for

indications exist that extinct *Sarcoramphus* species may have lived south and north of the present range of the genus.

First, Noriega and Areta (2005) identified from the late Pleistocene of Camet Norte, Buenos Aires Province, Argentina, several bones from a single individual of a *Sarcoramphus* vulture. The bones were found in a deposit C-14-dated to 24,550±600 yr BP (Pardiñas *et al.* 1998). Pardiñas *et al.* (1998) reconstructed the local paleoenvironment as semiarid-arid steppes. Noriega & Areta (2005) challenged their view, arguing that the presence of a *Sarcoramphus* species was evidence for the presence of forests. They rejected the possibility that the recorded individual was a vagrant and suggested that it originated from a local population. However, the record, as they presented it, allows for both interpretations. If the specimen indeed originated from a local population, then further research is needed to assess its taxonomic status. It is not impossible that an extinct *Sarcoramphus* species inhabited the steppes of Argentina (and adjacent parts of South America) in the late Pleistocene.

Second, Snyder and Fry (2013) suggested that an extinct *Sarcoramphus* species inhabited the southeastern USA (in agreement with most 19<sup>th</sup>-century authors, but against the opinion of most 20<sup>th</sup>-century authors; see above for citations). They based their opinion on a written account by William Bartram, who travelled in the region in the 1780s (Bartram 1791), a painting of a captive individual made in the 1730s in England by Albin (1738), and arguably on a description of an “eagle” from Louisiana by Le Page (1752: 125–126, 1758: 109, 1763: 75–76). [Note that Snyder & Fry 2013 incorrectly called this chronicler DuPratz and that they did not refer to his 1752 and 1763 works.]

Snyder and Fry (2013) suggested that *Sarcoramphus sacer* was recorded from Florida (Bartram) and Louisiana (Le Page). LePage's (1752, 1758, 1763) record from Louisiana, where he lived from 1718–1734, is uncertain, as noted by Snyder and Fry (2013), because his description of the bird cannot be unambiguously interpreted as that of *Sarcoramphus sacer*.

However, the existence of both a “southern” and a “northern” *Sarcoramphus* species can be doubted. First, the specimen recorded from the late Pleistocene of Argentina may indeed belong to *Sarcoramphus papa* as suggested by Noriega and Areta (2005). Secondly, Bartram's (1791) description of the bird might have been inaccurate (as suggested by most 20<sup>th</sup>-century authors; see above for citations). Other 18<sup>th</sup>-century authors who described the avifauna of the American Southeast did not record such a bird (Catesby 1732, 1743; Dumont 1753: 87–92; Bossu 1768: 172–178; see also McAtee 1950, 1957a,b). Albin's (1738) painting has been said to be incorrectly colored by his contemporaries (Edwards 1743: 2; see also Brisson 1760: 471). Finally, no *Sarcoramphus* bones were found in the Holocene deposits of the region to the best of my knowledge, although those of *Coragyps* and *Cathartes* vultures were (e.g. Brodkorb 1964, Emslie 1998).

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