

Contested spinetail systematics: nomenclature and the Code to the rescue

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SUMMARY.—Nomenclatural confusion in a complex of spinetails (*Synallaxis* spp.; Furnariidae) has arisen from early historical treatments in which new names were proposed for differing reasons. Following an historical evaluation and an examination of the rules of nomenclature we conclude that the name *Synallaxis cinereus* Wied, 1831, was proposed in such a manner as to immediately become a junior subjective synonym of *Parulus ruficeps* Spix, 1824 and that, by lectotypification, Wied's name has validly been made available.

The genus *Synallaxis* was erected by Vieillot in 1818 without designation of a type species. Gray (1840) subsequently designated southern South American Rufous-capped Spinetail *Synallaxis ruficapilla* Vieillot, 1819 (p. 117), as its type. Remsen (2003) considered this species to form a superspecies with *S. cinerea* (Bahia Spinetail) and *S. infuscata* (Pinto's Spinetail) and added 'this superspecies suggested by some authors as being most closely related to *S. frontalis* [Sooty-fronted Spinetail], *S. azarae* [Azara's Spinetail] and *S. courseni* [Apurimac Spinetail] on basis of plumage and vocal similarities'. The complex thus described is the background for this re-evaluation of the nomenclature of *S. cinerea* and related taxa.

The name *Synallaxis cinerea*¹ Wied², 1831, was not in use as a valid name for many years; most authors following the opinion of Sclater (1856: 97), who considered the name a junior subjective synonym of *Synallaxis ruficapilla* Vieillot, 1818. However, it was removed from synonymy when Whitney & Pacheco (2001) designated a lectotype for *S. cinerea* from the original type series in the American Museum of Natural History (AMNH), New York. This was accepted by Dickinson (2003), although his footnote referred only to 'Whitney *in litt.*' instead of citing the 2001 paper. It was also accepted by Remsen (2003). However, Stopiglia & Raposo (2006) doubted that the lectotype had been validly designated and based their argument on ICZN (1999) Art. 74.2 (lectotype found not to have been a syntype).

Here we seek to reveal the full complexity of this situation and to untangle it by drawing on the *International code of zoological nomenclature* (ICZN 1999), hereafter 'the Code' ('Art.' referring to articles of the Code). In this respect it is evident that there are not only two levels of approach that must be considered, the historic and the present one, but also two different perspectives which are mutually dependent: taxonomy and

¹ In the original publication Wied used the masculine ending for the Latin adjective *cinereus* (ashy grey). The supposed original labels by Wied consistently use the feminine ending *Synallaxis cinerea*, followed by the remark 'mihi', which means '[name proposed] by me'. The genus name *Synallaxis* being feminine, and the adjective *cinereus* variable, the correct spelling is *S. cinerea* as noted by Whitney & Pacheco (2001a; Art. 34.2. Mandatory change in spelling, agreement in gender).

² In full, Maximilian Alexander Philipp, Prinz zu Wied (1782–1867, Gebhardt 1964: 234). He is historically referred to as Maximilian (as in LeCroy & Sloss 2000) or Pr[inz]. Max (e.g., in Pelzeln 1859: 129); but more formally, the name Wied or zu Wied is used in recognition of his authorship of names at this time. His earlier use of zu Wied-Neuwied was to distinguish two branches of the Wied family—Wied-Neuwied and Wied-Runkel. When the last descendant of the house of Wied-Runkel died in 1824, Wied-Neuwied reunified his shire after 300 years of separation. From that year, Maximilian, Prinz zu Wied did not use his compound appellation again (Tullius 2003; M. LeCroy *in litt.* 2013).

nomenclature. Different taxonomic views necessitate different nomenclatural decisions, yet the nomenclature applied should still serve stability in zoological names as far as possible. Here interpretations of the provisions of the Code affect such nomenclatural decisions, and those 'interpretations' must themselves be used with care, both in assessing the deeper intentions of earlier authors and in applying the relevant articles of the Code.

Names proposed by Lichtenstein (1823), Spix (1824) and Wied (1831)

The nomenclatural history commences with the name *Synallaxis ruficapilla* Vieillot, 1819. Hellmayr (1925: 75) noted that 'the type examined in the Paris Museum had been obtained by Delalande near Rio de Janeiro' and amongst the synonyms listed (Hellmayr 1925: 76) are *Sphenura ruficeps* Lichtenstein ('part, adult') and *Synallaxis cinereus* Wied ('part, Brazil'). These restrictions by Hellmayr are clear signals that the respective type material was thought to comprise specimens of more than one taxon, an opinion shared by most subsequent authors until 2001.

Vieillot's contributions (1818, 1819) were not accessible to Lichtenstein (1823: VIII) when he described *Sphenura ruficeps* from an unknown number of specimens from 'Cayana [French Guiana] and Pará [sic]', including short descriptions of adult and 'juniores' [younger birds]. Four syntypes (SysTax 2013) are currently considered to be held at Zoologisches Museum Berlin (ZMB) and Cabanis (1866: 307) described *Synallaxis poliophrys* based on the single specimen labelled Cayana [= reg. no. 9095; in SysTax 2013]. Hellmayr (1925: 76), who had examined the material, considered the locality Pará erroneous and the adult syntype conspecific with *Synallaxis ruficapilla* Vieillot. However, as no lectotype has been formally designated, the taxonomic identity of *Sphenura ruficeps* remains somewhat questionable. A thorough re-evaluation of the original type series would be desirable, considering also the diaries (1818–31) of the collector Friedrich Sellow and problems originating from inadequate early label transcriptions at ZMB (Stresemann 1948, Rego *et al.* 2013).

Spix (1824: 85) described *Parulus ruficeps* based on two specimens (thought to be one of each sex), figured on pl. 86 (fig. 1: male; fig. 2: female) and originating from the rio São Francisco in Bahia. Spix's material was originally deposited in Munich (Zoologische Staatssammlung München, ZSM). The 'female' syntype (ZSM 151) is still in the collection, and a colour photograph of it was provided by Stopiglia & Raposo (2006: 53, fig. 2). The 'male' syntype was missing by 1906, when Hellmayr (1906: 631) revised Spix's types³. In Hellmayr's opinion, most original labels from Spix had been lost (p. 565), and there is no indication among the four labels of ZSM 151 that any is in Spix's hand. Gray (1840: 17) included the genera *Parulus* Spix and *Sphenura* M. H. C. Lichtenstein within *Synallaxis* Vieillot, whereby the name *S. ruficeps* (Spix) became invalid (Art. 59.1) as a junior secondary homonym of *S. ruficeps* (Lichtenstein). Subsequently Sclater (1856) described *Synallaxis spixi* (Spix's Spinetail) and Pelzeln (1859) *Synallaxis frontalis*, based respectively on the male and female of *Parulus ruficeps* Spix, by bibliographic reference (Art. 72.4.1).

Wied (1831: 685) described *Synallaxis cinereus* [sic] from an unknown number of specimens, including detailed descriptions and measurements of the male, female and young female. He provided no illustrations, but instead referred to the coloured plate

³ Given that Spix's type specimens were exchanged after the Munich museum received fresh Brazilian material in 1855, there is a chance that the 'male' type specimen was sent to another collection that was in exchange with Munich at the time. The fresh material came from the private collection of Maximilian von Leuchtenberg (c.1817–52), whose brother Karl August Eugène Napoleon von Leuchtenberg (1810–35) and sister, Amalie von Leuchtenberg (1812–73), the second wife of Pedro I of Brazil, had sent Brazilian specimens back to Bavaria. In 1855 von Leuchtenberg's collection was donated to the Munich museum, when his family moved to Russia following his death (Steinheimer 2003). Later in the 1860s, Spix specimens were exchanged, *inter alia*, with the museums in Bamberg and Vienna (Schifter *et al.* 2007: 252).

'*Parulus ruficeps*, Spix Tab. 86. Fig. 1 und 2'. Concerning the origin of his material, Wied (1831: 688) mentioned 'virgin forest along the street of Capitaio Filisberto' (p. 688)⁴, adding (p. 689): 'This traveller [=Spix] found our bird at the Rio St. Francisco and named it *Parulus ruficeps*.'⁵ The main part of Wied's collection is housed in the American Museum of Natural History, where the type material of *Synallaxis cinerea* has been assessed in detail by Allen (1889) and LeCroy & Sloss (2000)⁶.

Allen (1889: 243) expressly recorded 'five specimens labelled by him [Wied]' and that, although 'evidently a Wied specimen,' only AMNH 5204 lacked an original label. LeCroy & Sloss (2000: 19) nevertheless concluded that, of six supposed Wied specimens, only three (AMNH 6811–6813) unquestionably match Wied's description and could be regarded as syntypes (representing taxonomically *S. ruficapilla* Vieillot). Drawing on diagnostic differences provided by Vaurie (1980), they concluded that the three additional specimens (AMNH 6814, 6815 and 5204) did not belong to the original type series because they were 'so different in size and appearance from the other three'. However, they did not designate a lectotype and retained these specimens with the three syntypes 'because of the uncertainty surrounding them'. Understandably missing from the discussion by LeCroy & Sloss (2000) was a reconsideration of type material included by bibliographic reference (Art. 72.4.1), there being, at that juncture, no reason to expand the subject. On the other hand, the fact that Wied had expressly included *Parulus ruficeps* Spix—currently considered to have been based on two different taxa [male: *S. spixi* P. L. Sclater, 1856; female: *S. frontalis* Pelzeln, 1859]—in his *S. cinereus* makes it evident that the syntype series was composite, i.e. taxonomically mixed. The constant difference between spelling in Wied's (1831) publication (*Synallaxis cinereus*) and on the original labels (*Synallaxis cinerea*) suggests at least that all specimens had been labelled (or relabelled?) at the same time, but whether before publication or (more likely) afterwards remains an open question.

A completely different view concerning the type material of *S. cinereus* was proffered by Stopiglia & Raposo (2006: 49). In their opinion 'Wied [when proposing *S. cinereus*] was merely providing a new name for *Parulus ruficeps* Spix, 1824, to avoid problems of homonymy.' As a consequence they suggested the provisions of Art. 72.7 would apply and both the nominal taxa would have the same name-bearing type. The rationale for this new interpretation was based on their analysis of Wied's German text, with Wied's intention, according to Stopiglia & Raposo (2006), being to replace the prospective junior secondary homonym *Parulus ruficeps* Spix, 1824 (in *Synallaxis* preoccupied by *Sphenura ruficeps* M. H. C. Lichtenstein, 1823) by a *nomen novum*.

However, such express intention in Wied's text is not convincing. In 1831, at the time of the publication of the name *Synallaxis cinereus*, the name *Parulus ruficeps* Spix was not formally preoccupied. Although Wied criticised Spix's attitude of not considering or citing names of other authors, he referred to this matter only in general and in part as an explanation for using his own name *cinereus*. Wied did not cite the name *Sphenura ruficeps*

⁴ The type locality 'Strasse des Capitaio Filisberto' refers to the road opened by Tenente-Coronel Filisberto Gomes da Silva, relative of Marechal Felisberto Caldeira who had ordered and paid for this enterprise two years before the travels of Wied. The road linked the harbour of Ilhéus to the border of Minas Gerais, east of the village of Rio Pardo. Wied (1821: 99, 333) left 'S. Pedro d'Alcantara' (= Itabuna) on 6 January 1817 for 'Barra da Vareda' (= Inhobim), where he arrived on 30 January 1817, via the road of Captain Filisberto (Moraes, 2009: 35 footnote). Pacheco & Gonzaga (1995) placed the type locality near Ilhéus, southern Bahia, Brazil.

⁵ 'Dieser Reisende [= Spix] fand unseren Vogel am Rio St. Francisco und nannte ihn *Parulus ruficeps*.'

⁶ No specimen of this taxon has been found in the collection of the Hessische Landesmuseum für Kunst und Natur at Wiesbaden, Germany, which holds a small number of Wied's specimens (Hoffmann & Geller-Grimm 2013).

either in his taxonomic concept of *Synallaxis* (Wied 1831: 683–685) or in his description of *Synallaxis cinereus* (Wied 1831: 685–689). Nor did he suggest any intention to include the genus *Sphenura* M. H. C. Lichtenstein in *Synallaxis*, or touch on the issue of homonymy⁷ in a wording of his own. What Wied actually did write⁸ translates as ‘the name *ruficeps* could equally fit several of these birds’, and that it was therefore an inappropriate name that should be rejected (‘zu verwerfen ist’). The implication is that he felt the name was inaccurate. In our reading of Wied’s original text and *contra* Stopiglia & Raposo (2006, 2008), we understand that Wied disliked the name because the epithet *ruficeps* (red-headed) did not truly characterise the taxon—and not for the reason that the species-group name had already been in use within the same genus (which it actually was not)⁹. Wied was by no means alone at this period in the development of modern zoology in altering a name he felt to be inappropriate, and he said he felt entitled to alter (‘abzuändern’) this one¹⁰. However, the present Code explicitly states that ‘the availability of a name is not affected by inappropriateness’ (Art. 18) and such a name ‘is not to be rejected, even by its author(s), for a reason such as its inappropriateness’ (Art. 23.3.7). The name *Synallaxis cinerea* Wied, 1831, is thus not a new replacement name / *nomen novum* (Art. 60.3) required by the Code for the replacement of a preoccupied name (and denoted by type material as provided by Art. 72.7). In 1831, *Parulus ruficeps* Spix was not a homonymous species-group name. In fact Wied (1831) had proposed a new substitute name not required by the Code, thereby producing a junior subjective synonym denoted by its own type material according to the provisions of Art. 72.4.1 (*contra* Stopiglia & Raposo 2006). Since the type concept was virtually unborn at that point, Wied himself will not have considered this one way or another.

The case of *Synallaxis whitneyi*

If the AMNH syntypes attributable to *Synallaxis cinereus* Wied include AMNH 6813, in agreement with the interpretations by Allen (1889) and LeCroy & Sloss (2000), then the designation of AMNH 6813 as the lectotype for this taxon (Whitney & Pacheco 2001: 35) is valid. In such circumstances we respect their judgement in formally considering *Synallaxis whitneyi* Pacheco & Gonzaga a junior subjective synonym of *Synallaxis cinerea* Wied.

Bearing in mind the possibility of taxonomic changes in the future, we present here synonymies for *S. ruficapilla*, *S. ruficeps* and *S. cinereus* that set out current valid names, synonyms and their status, authors, types and type localities.

***Synallaxis ruficapilla* Vieillot, 1819: 310 (Rufous-capped Spinetail)**

Type locality: near Rio de Janeiro, Brazil.

Type material: [presumably] holotype by monotypy, specimen¹¹ figured in Vieillot (1834: 284, pl. 174), deposited in Muséum national d’Histoire naturelle (MNHN), Paris (*vide* Menegaux & Hellmayr 1906: 69).

⁷ The term homonymy was not in use among zoologists at that time and was still missing in the Stricklandian Code (Strickland *et al.* 1843).

⁸ The original German text reads as (Wied 1831: 689): ‘Wenn ich auch gänzlich davon absehe, daß Spix den großen Fehler beging, sich nirgends an die von andern gegebenen Benennungen zu binden, indem er bei keinem einzigen Thiere der übrigen Schriftsteller gedenkt, so habe ich mich hier selbst berechtigt geglaubt, den Trivialnamen abzuändern, indem die Benennung *ruficeps* auf mehrere dieser Vögel paßt, daher zu verwerfen ist.’

⁹ A new replacement name (*nomen novum*) is not to be proposed in advance, to avoid possible homonymy in the future, but only for an already preoccupied name (Arts 53.3 and 60).

¹⁰ The Stricklandian Code, proposed 12 years later (Strickland *et al.* 1843: 266) included several instances where a name could or should be changed, e. g.: ‘§ 11. Names not clearly defined may be changed.’

¹¹ Collected by ‘Delalande fils’ [= Pierre Antoine Delalande, 1787–1823]

= *Sphenura ruficeps* M. H. C. Lichtenstein, 1823: 42.

Type locality: Cayana [French Guiana], Pará [Brazil].

Type material: syntypes (reg. nos. 9089–9091, 9095, *vide* SysTax 2013), deposited in Zoologisches Museum Berlin (ZMB), now Museum für Naturkunde – Leibniz-Institut für Evolutions- und Biodiversitätsforschung an der Humboldt-Universität zu Berlin.

Junior subjective synonym in G. R. Gray (1846: 135 [originally without pagination]).

Junior subjective synonym (*pro parte*: adult, Brazil) in Hellmayr (1925: 76) and subsequent authors.

Remarks: there should be additional syntypes extant elsewhere, acquired from ZMB or the dealer Eimbeck (Braunschweig) around 1823, which so far have not been recognised. The specimen labelled Cayana (ZMB 9095 [holotype of *Synallaxis poliophrys* Cabanis, 1866: 307; by monotypy]), is currently considered to represent taxonomically *Synallaxis frontalis* Pelzeln, 1859: 117 (Remsen 2003: 277).

= *Synallaxis olivacens* Eyton, 1851: 159, pl. 81 [name on plate: *S. olivascens*]

Type locality: South America, exact locality not known.

Type material: two syntypes (one listed as adult, reg. no. 1881.2.18.173 in Warren & Harrison 1971: 404 [as *S. olivaceus*]), deposited in British Museum (Natural History) (BMNH), now Natural History Museum, Tring.

Junior subjective synonym in P. L. Sclater (1874: 5) and subsequent authors.

Remark: correct original spelling (Art. 32.2.1): *Synallaxis olivacens*, following Hellmayr (1925: 76) as First Reviser (Art. 24.2.3).

= *Synallaxis (Barnesia) cururuvi* Bertoni, 1901: 77

Type locality: Djaguarasapá, Alto Paraná, Paraguay.

Type material: not specified, presumably lost (Hayes 1995: 32).

Junior subjective synonym in Lynch Arribálzaga (1902: 353), Hellmayr (1925: 76) and subsequent authors.

***Synallaxis cinerea* Wied, 1831: 685 (as: *Synallaxis cinereus*) (Bahia Spinetail)**

Type locality: Road of Capitao Filisberto, near Ilhéus, southern Bahia, Brazil.

Type material: lectotype, reg. no. 6813 (Whitney & Pacheco 2001: 35), deposited in the American Museum of Natural History (AMNH), paralectotypes: AMNH 6811, 6812.

= *Synallaxis whitneyi* Pacheco & Gonzaga, 1995: 3

Type locality: 7 km south-east of Boa Nova, Bahia, Brazil.

Type material: holotype male, reg. no. 74011, deposited in Museu de Zoologia da Universidade de São Paulo (MZUSP), paratypes: females MZUSP 74012, 74013.

Junior subjective synonym in Whitney & Pacheco (2001: 34).

Independently, two papers on *Synallaxis ruficapilla* relevant to this complex of spinetails have recently been published emphasising phylogenetics and biogeography (Batalha-Filho *et al.* 2013, Stopiglia *et al.* 2013); our current paper is restricted to nomenclatural issues only.

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