In support of Pinto: Pernambuco as the type locality of Thalurania watertonii

Authors: Collar, N. J., and Kirwan, G. M.

Source: Bulletin of the British Ornithologists' Club, 138(3) : 265-271

Published By: British Ornithologists' Club

URL: https://doi.org/10.25226/bboc.v138i3.2018.a7

In support of Pinto: Pernambuco as the type locality of *Thalurania watertonii*

by N. J. Collar & G. M. Kirwan

Received 30 May 2018; revised 1 July 2018; published 24 September 2018

http://zoobank.org/urn:lsid:zoobank.org:pub:C23AF243-0B52-48DE-92A2-2CF21408BE85

Summary.—Long-tailed Woodnymph *Thalurania watertonii* is known with certainty from Pernambuco, Alagoas and Sergipe, north-east Brazil, but the type specimen is still listed, albeit with reservations, as having been taken 3,000 km to the west in Guyana. The collector, Charles Waterton, gave the specimen to George Loddiges in 1844, claiming he took it 20 years earlier on the Mibiri Creek, south of what is now Georgetown. However Waterton, who had a particular interest in hummingbirds, also collected 58 birds in forest near Recife, Pernambuco, in 1816. Given these facts, the total absence of other records of the species from Guyana and its replacement there by Fork-tailed Woodnymph *T. furcata*, it seems far more likely that Waterton simply misremembered where he collected his specimen of *T. watertonii* and that the type locality is, as O. M. O. Pinto judged, Pernambuco (more specifically coastal Pernambuco).

Long-tailed Woodnymph *Thalurania watertonii* currently has the IUCN Red List status of Endangered, owing to the combination of its small estimated global population (<2,500 mature individuals) and continuing forest loss within its small, fragmented range in the coastal states of Pernambuco, Alagoas, Sergipe and possibly Bahia, north-east Brazil (Pacheco & Whitney 1995, BirdLife International 2017). Confidence in this evaluation of its conservation status is slightly weakened by the fact that its type locality is in Guyana (Bourcier 1847); and although most authorities have chosen to set this aside as an error, almost no attempt has been made to investigate the circumstances in which a mistake could have arisen. Consequently, the possibility that the species might occur in Guyana (and therefore, through an increased geographical extent of occurrence, enjoy a less troubling conservation status), however implausible, has not fully been explored or rejected.

The specimen on which the name *Trochilus watertonii* was based was found among the rich body of hummingbird material left behind by the renowned English botanist and horticulturist George Loddiges (1786–1846) after his death. In describing the species, Bourcier (1847) indicated that the name had already been used by Loddiges in his unpublished manuscript notes, and that the type locality was 'Mibiri Creek, à 40 mille de la rivière Essequibo'.

At some stage in the 19th century the Loddiges collection of hummingbirds became lost, until A. L. Butler traced it and enabled its acquisition by what is now the Natural History Museum (NHMUK) at Tring, UK, along with Loddiges's notes (Warr 1996). Loddiges's acquisition of what later became the type of *Trochilus watertonii*, now NHMUK 1933.11.14.12, was a ten-year waiting game with the explorer and naturalist Charles Waterton (1782–1865), who, following the publication in 1825 of his remarkable *Wanderings in South America*, had become a celebrated but also (owing largely to an ill-advised taxidermical prank he played with an artifice he called his 'Nondescript') notorious figure in English public life (Blackburn 1989, Morris 2014). According to excerpts from manuscript notebooks published by Butler (1926), Loddiges first saw the specimen on 27 August 1834 during a visit to

ISSN-2513-9894 (Online)

Figure 1. Sketch by George Loddiges of the ventral view of the type specimen of *Thalurania watertonii*, wings held open by an unseen hand (Loddiges 1826–45, notebook 6, p. 455) (Harry Taylor © Natural History Museum)

Figure 2. Sketch by George Loddiges of the dorsal view of the type specimen of *Thalurania watertonii*, wings held open by an unseen hand (Loddiges 1826–45, notebook 6, p. 456) (Harry Taylor © Natural History Museum)

Waterton's home at Walton Hall, near Wakefield, in (now West) Yorkshire. Butler (1926: 334) mentioned that Loddiges immediately recognised it as a new species, writing a description and drawing two sketches of it in his notebook. This text (Loddiges 1826–1845, notebook 6, pages numbered 455–457) is introduced (p. 454) by a list of hummingbird taxa held by Waterton at Walton Hall, ending with '*furcatus*' followed by 'new species like *furcatus*'. The manuscript continues (some punctuation and notes in square brackets added):

> 'Waterton has a new species connecting *glaucopis* [Violet-capped Woodnymph *T. glaucopis*] with *furcatus* & *eriphile* [*T. f. eriphile* and *T. f. baeri* 'were in the past separated as *T. eriphile*': Schuchmann 1999]. Tail longer than *glaucopis* like a young swallow-t [Swallow-tailed Hummingbird *Eupetomena macroura*], colour of *hirundinaceus* [old name for *E. macroura*], middle feathers broad and truncated. Back entirely luminous blue. Throat, neck, breast & belly to the vent like *glaucopis* but more golden. Sides of the body blue colour of *furcatus* but this colour is only under the wings. Back from the shoulders to halfway down the body rich violaceous blue like *furcatus* but much more of the blue;

ISSN-2513-9894 (Online)

> this also extends to the upper part of the wings. The lower part of back going into [the] tail coverts the colour of *waglerii* [Blue-headed Hummingbird *Cyanophaia bicolor*] and the tail appeared the colour of *waglerii*. Head appears luminous like *eriphile* but possibly not so bright. I could not get light upon it. This species was shot by Mr Waterton in Guiana. It differs from *glaucopis* in having blue sides and a longer tail, and also from *furcatus* and *eriphile* in having the whole front green and only blue under the wings with much more of the violaceous colour on the back and a far longer and more forked tail than either—a fine and very distinct species.'

The sketches (Figs. 1–2) clearly show the slight rightwards contortion of the head and neck still present in the type, but the wings are shown held open by manipulation, not as in the type at rest.

Almost ten years later, on 15 August 1844, he (Loddiges 1826–1845, notebook 10, page numbered 731; text slightly different from the same quotation in Butler 1926: 335, including the spelling of *watertonii*) wrote that

> 'Waterton presented me with his bird which I call *Trochilus watertonii*[.] He says he shot it 20 years ago at Mr Edmonston's [*sic*; Edmonstone as in Butler (1926) is correct] Mibiri Creek, 40 miles up the Essequibo and there are plenty of the same species there from October to Christmas.'

It might just be noted first that 'up the Essequibo' is an inaccuracy evidently based on a memory lapse on Waterton's part, since Waterton (1825: 79, 153) explicitly stated that Mibiri Creek is a tributary of (and reached via) the Demerara River, and second that, although Stephens & Traylor (1985) were unable to locate this watercourse, it is shown on a version of Google Maps as being immediately adjacent to the Santa Mission, whose coordinates are given as 06°33′35.1″N, 58°20′13.3″W, and indeed as flowing into the Demerara (albeit only *c*.40 km rather than 40 miles below Georgetown). Stephens & Traylor (1985) appeared to be copying Butler in indicating a collection date of 'ca. 1802', but Waterton (1825) clearly placed the date of his first visit to Mibiri Creek as 1812 and his last as 1820.

For several years after Bourcier's description, *Trochilus watertonii* was known only from the type locality in Guyana, but then Gould (1861) reported that he had received two specimens 'not I believe [from] Demerara [= Guyana], but towards the confines of Brazil, and probably near the embouchure of the great river Amazon'. Both specimens are males and stored in NHMUK (1888.7.25.294 and 295). Nevertheless, Salvin & Elliot (1873) and Elliot (1878) listed the species as occurring only in Guyana. Subsequently, however, Salvin (1892: 78) reported that 'Count von Berlepsch has recently received specimens from Pernambuco' (north-east Brazil) and Boucard (1894–95: 105) stated that 'I have only two males, which were found in a collection of Brazilian birds'. Gounelle (1909) collected three specimens in 1892 at Peri-Peri (= Pery Pery, or Pirituba, 08º05′S, 35º22′W), in eastern Pernambuco, *c*.50 km west of Recife (one being sent to the American Museum of Natural History, New York [AMNH 481566]: Pinto 1954).

Consequently, by the time Hartert (1900) assembled his review of the Trochilidae, he listed the range of *Thalurania watertonii* as 'eastern Brazil; allegedly also in Guyana, which is highly uncertain' (our translation), while Brabourne & Chubb (1912) and likewise Cory (1918) stated its range to be 'eastern Brazil', with no mention of Guyana, other than the type locality; and Chubb (1916) omitted all reference to it. However, Butler (1926), having quoted from Loddiges's notebooks about the acquisition of the specimen, mentioned that 'recent authors—Salvin, Boucard, Hartert, Brabourne and Chubb, Cory, etc.—are united in throwing doubt on the British Guiana locality of the type of this species, solely on

ISSN-2513-9894 (Online)

the grounds that all subsequent examples have come from Brazil', but insisted: 'There is nothing vague about these particulars except the date, and I think the type-locality Mibiri Creek should be accepted.'

After Hartert, Peters (1945: 48) was apparently the first authority specifically to question the validity of Bourcier's type locality and thus Waterton's claim as to where he had collected the species. Nevertheless, Peters still listed the range of *T. watertonii* as 'British Guiana (where known only from the type); coastal region of eastern Brazil from Pará to Bahia' (Bahia having been mentioned as part of the range by Simon 1921: 83). Almost simultaneously, Pinto (1944) considered its distribution to encompass 'Guianas, north and east Brazil; coastal zone of Pará (Foz do Amazonas), Pernambuco and Bahia.' Later, however, Pinto (1954) considered the Guyana type locality to be 'extremely dubious' (our translation), and recommended that it be substituted with 'Pernambuco' based on the fact that Waterton had visited the state's interior in 1816, although in fact the latter's travels were restricted to coastal areas (see below). Pinto (1978) reiterated his belief that the type locality should be emended. Snyder (1966) placed the species in square brackets for Guyana, while Braun *et al*. (2000) and Restall *et al*. (2006) made no mention of it.

The majority of Waterton's record of his *Wanderings* is devoted to his explorations of the Guianas in four expeditions spanning the years 1812–24, although as his title indicates his journeys took him considerably further. The fact that he spent a little time in Brazil seems generally to have been overlooked, despite a reference to his collecting in Pernambuco and Maranhão by Sick (1985). Pernambuco being within the range of *Thalurania watertonii*, the question arises whether Waterton might have collected the type there rather than in Guyana.

The answer is unequivocally yes. Although all four of the 'journeys' that Waterton describes in his *Wanderings* focused on the Guianas, it was for Pernambuco, Brazil, that his ship set sail in March 1816 at the start of his second journey. How long he stayed there is not clear, but it was evidently several weeks, as suggested by the reference below to his departure being triggered by the advent of the rainy season, which in the state generally runs from May to July (Anon. 2017). At any rate, during that time he clearly recorded that he visited coastal rainforest—the habitat of *T. watertonii* (Schuchmann 1999)—and collected birds. He used what he called Pernambuco 'city' (Recife) and Olinda, immediately to the north, as his bases.

> 'At Olinda there is a national botanical garden; it wants space, produce, and improvement. The forests, which are several leagues off, abound with birds, beasts, insects, and serpents. Besides a brilliant plumage, many of the birds have a very fine song' (Waterton 1825: 98).

He followed this with brief accounts of a number of passerine birds, including the collection of one that was mobbing a snake, and then announced:

> 'It was now the rainy season; the birds were moulting; fifty-eight specimens of the handsomest of them in the neighbourhood of Pernambuco had been collected; and it was time to proceed elsewhere' (Waterton 1825: 102).

While it is not explicit that a hummingbird was one of these 58, it is certain that Waterton was very interested in hummingbirds. Moreover, he particularly writes about them in the subsequent part of this second journey, when he returned north-west from Pernambuco to his much-favoured Guianas and to the port he arrived in on his first journey, Stabroek (Georgetown). Having described human life there and in other coastal towns, he turned his attention to 'the feathered tribe' and spent over two pages discoursing on

ISSN-2513-9894 (Online)

hummingbirds, which he thought were, through their iridescent plumages, 'entitled to the first place in the list of the birds of the new world'. This in no way led him to shrink from collecting them: 'On opening the stomach of the humming-bird, dead insects are almost always found there' (Waterton 1825: 116). That indeed he collected many hummingbirds is apparent from an entry in the explanatory index by the editor of a posthumous re-issue of the *Wanderings*, where Waterton is quoted from an unknown source as follows: 'Authors are divided as to the exact kind of food which humming-birds require. In all the species which I have inspected (and I have inspected not a few) I have found insects, or fragments of insects, in the oesophagus' (Waterton 1879: 424).

Our evidence is circumstantial, but we think it is compelling. *Thalurania watertonii* is confined to forest in a highly restricted range in Pernambuco, Alagoas and Sergipe, Brazil (BirdLife International 2017). Since the collection of the type it has never been recorded in Guyana, where the supposed type locality is just under 3,000 km from Recife. (We judge that the ascription 'British Guiana' or 'Guiana' on the labels of three specimens in NHMUK, 1887.3.22.1009, 1887.3.22.1010 and 1913.3.20.320, was curatorial guesswork based on the reported type locality.) Waterton visited forest within the range of the species in Pernambuco and reported that he collected 58 specimens of birds at the time; and we know that he was a habitual collector of hummingbirds. In 1844 he told Loddiges that he collected the type 'twenty years ago', which would have been on his fourth journey, when he again went up the Essequibo River to explore. However, in the Guianas he would very probably have been familiar with a closely related and similar-looking species, the Fork-tailed Woodnymph *T. furcata*, which is widespread across northern South America in lowlands and foothills but is replaced by *T. watertonii* in north-east Brazil (see maps in BirdLife International 2017).

Waterton bequeathed his natural history collections to Stonyhurst College, the school where he was educated. Apart from a few cases, the material is now housed, some of it on display (including the notorious Nondescript), in Wakefield Museum (Wakefield being Waterton's birthplace). A manuscript catalogue of this material exists, but does not list the place of origin of the hummingbirds. One of us (NJC) visited Wakefield Museum and Stonyhurst College on 17 November 2017 and inspected the glass cases within which Waterton's hummingbirds are preserved; none proved to have a label, and none was either a Fork-tailed or a Long-tailed Woodnymph. This brief exercise, plus an inquiry at the National Museums Scotland concerning their collection of Waterton's correspondence (Anon. 2018) in case a list of the 58 specimens collected in Pernambuco might be filed within it (none found: G. Rogers *in litt*. 2018), exhausted seemingly the last possible opportunity to shed further light on where *T. watertonii* was first collected (unless stable isotope or genetic analysis could one day be called into service), but we believe we have enough circumstantial evidence to argue that, many years after the event, Waterton simply misremembered (in both 1834 and 1844) the site and time of his collection of the type of *T. watertonii* (just as he evidently misremembered that the Mibiri Creek was a tributary of the Demerara not the Essequibo River). We therefore support Pinto's reassignment of the type locality of *T. watertonii* to 'Pernambuco' and suggest that it might be further delimited to 'coastal Pernambuco'.

For such a rare species, known from comparatively few definite localities and specimens—albeit Las-Casas & Azevedo-Júnior (2009) mentioned 28 of the latter in the Coleção Ornitológica, Universidade Federal de Pernambuco, Recife—the range of Long-tailed Woodnymph has been subject to considerable uncertainty in the literature. Apart from the puzzle over the type locality, the suggestion that the species' range extended as far north-west along the Brazilian coastline as the mouth of the Amazon, first made by Gould (1861), was being repeated as late as the 1940s (Pinto 1944, Peters 1945), despite the lack of tangible

ISSN-2513-9894 (Online)

evidence and the obvious uncertainty of the initial and unique report of its presence there. Moreover, the evidence that the species was ever recorded in Bahia is far from clear, resting on an assertion in Simon (1921) and a suggestion in Pacheco & Whitney (1995), and needs substantiation. Indeed, a complete inventory of specimen material relating to *Thalurania watertonii*, with localities, dates and collectors, conflated with all dependable observer records, would greatly help clarify the conservation status and requirements of this species.

Acknowledgements

Stephanie Webb at Wakefield Museum and Joe Reed, Assistant Curator, Stonyhurst College, were most helpful in answering our inquiries. Glauco Pereira, Samantha Palhona and Marco Aurélio Crozariol kindly assisted with some literature. Mark Adams and Hein van Grouw permitted access to specimens, including the type, of *Thalurania watertonii* at the Natural History Museum, Tring, where Alison Harding also gave much help accessing Loddiges's manuscript material and facilitated the photographs of Loddiges's sketches (kindly taken by Harry Taylor). Georgina Rogers graciously checked Waterton papers at the National Museums Scotland. Pat Morris, Robert Prŷs-Jones and Frank Steinheimer were most helpful referees.

References:

Anon. 2017. https://en.wikipedia.org/wiki/Climate_of_Brazil (accessed 24 August 2017).

Anon. 2018. https://archiveshub.jisc.ac.uk/search/archives/03959150-f47f-308a-8eed-9c09900e2a9e (accessed 1 June 2018).

BirdLife International. 2017. Species factsheets: *Thalurania watertonii* and *T. furcata*. http://www.birdlife.org (accessed on 23 August 2017).

Blackburn, J. 1989. *Charles Waterton, 1782–1865: traveller and conservationist*. Bodley Head, London.

Boucard, A. 1894–95. *Genera of humming birds*. Privately published, London.

Bourcier, J. 1847. Description de quinze espèces de Trochilidées du cabinet de M. Loddiges. *Proc. Zool. Soc. Lond*. 1847: 42–47.

Brabourne, W. & Chubb, C. 1912. *The birds of South America*. R. H. Porter, London.

Braun, M. J., Finch, D. W., Robbins, M. B. & Schmidt, B. K. 2000. *A field checklist of the birds of Guyana*. Smithsonian Institution, Washington, DC.

Butler, A. L. 1926. Some notes on the humming-birds included in Chubb's 'Birds of British Guiana'. *Ibis* 68: 333–339.

Chubb, C. 1916. *The birds of British Guiana*, vol. 1. Bernard Quaritch, London.

Cory, C. B. 1918. Catalogue of birds of the Americas and adjacent islands, pt. 2(2). *Publ. Field Mus. Nat. Hist. (Zool. Ser.)* 197.

Elliot, D. G. 1878. A classification and synopsis of the Trochilidae. *Smiths. Contrib. Know*. 317.

Gould, J. 1861. *A monograph of the Trochilidae, or family of humming-birds*, vol. 2. Taylor & Francis, London.

Gounelle, E. 1909. Contribution à l'étude de la distribution géographique des Trochilidés dans le Brésil central et oriental. *Ornis* 13: 173–183.

Hartert, E. 1900. Trochilidae. Issue 9 *in* Schulze, F. E. (ed.) *Das Tierreich*. R. Friedländer & Sohn, Berlin.

Las-Casas, F. M. G. & Azevedo-Júnior, S. M. 2009. Dimorfismo sexual de tamanho no beija-flor-de-costas-violetas *Thalurania watertonii* (Bourcier, 1847) (Aves: Trochilidae): implicações ecológicas. *Ornithologia* 3: 83–89.

Loddiges, G. 1826–1845. Manuscript collection held in Natural History Museum, Tring.

Morris, P. A. 2014. *Charles Waterton (1782–1865) and his eccentric taxidermy*. MPM Publishing, Ascot.

Pacheco, J. F. & Whitney, B. M. 1995. Range extensions for some birds in northeastern Brazil. *Bull. Brit. Orn. Cl.* 115: 157–163.

Peters, J. L. 1945. *Check-list of birds of the world*, vol. 5. Harvard Univ. Press, Cambridge, MA.

Pinto, O. M. O. 1944. *Catálogo das aves do Brasil. Segunda parte*. Departamento do Zoologia, São Paulo.

Pinto, O. M. O. 1954. Resultados ornitológicos de duas viagens científicas ao Estado de Alagoas. *Pap. Avuls. Dept. Zool. São Paulo* 12: 1–98.

Pinto, O. M. O. 1978. *Novo catálogo das aves do Brasil. Primeira parte*. Conselho Nacional de Desenvolvimento Científico e Tecnológico, São Paulo.

Restall, R., Rodner, C. & Lentino, M. 2006. *Birds of northern South America: an identification guide*, 2 vols. Christopher Helm, London.

Salvin, O. 1892. Suborder Trochili. Pp. 27–433 *in* Hartert, E. & Salvin, O. (eds.) *Catalogue of the birds in the British Museum*, vol. 16. Trustees of the Brit. Mus. (Nat. Hist.), London.

Salvin, O. & Elliot, D. G. 1873. Notes on the Trochilidae. The genus *Thalurania*. *Ibis* (3)3: 353–361.

Schuchmann, K. L. 1999. Family Trochilidae (hummingbirds). Pp. 468–680 *in* del Hoyo, J., Elliott, A. & Sargatal, J. (eds.) *Handbook of the birds of the world*, vol. 5. Lynx Edicions, Barcelona.

Sick, H. 1985. *Ornitologia brasileira, uma introdução*. Ed. Universidade de Brasília.

Simon, E. 1921. *Histoire naturelle des trochilidés (synopsis et catalogue)*. Ed. Encyclopédie Roret, Paris.

ISSN-2513-9894 (Online)

Snyder, D. F. 1966. *The birds of Guyana*. Peabody Mus., Salem, MA.
Stephens, L. & Traylor, M. A. 1985. *Ornithological gazetteer of the Guianas*. Mus. Comp. Zool., Cambridge, MA.
Warr, F. E. 1996. *Manuscripts and drawings in the Ornithology and Rothschild Libraries of The Natural History Museum at Tring*. British Ornithologists' Club Occ. Publ. 2.
Waterton, C. 1825. *Wanderings in South America, the north-west of the United States, and the Antilles, in the years 1812, 1816, 1820, & 1824*. J. Mawman, London.
Waterton, C. 1879. *Wanderings in South America, the north-west of the United States, and the Antilles, in the years 1812, 1816, 1820, & 1824*. Edited, with biographical introduction and explanatory index, by the Rev. J. G. Wood. Macmillan, London.

Addresses: N. J. Collar, BirdLife International, The David Attenborough Building, Pembroke Street, Cambridge CB2 3QZ, UK, and Bird Group, Dept. of Life Sciences, Natural History Museum, Akeman Street, Tring, Herts. HP23 6AP, UK, e-mail: nigel.collar@birdlife.org. G. M. Kirwan, Field Museum of Natural History, 1400 South Lakeshore Drive, Chicago, IL 60605, USA, e-mail: GMKirwan@aol.com

ISSN-2513-9894 (Online)