

***Charadrius wilsonia brasiliensis* Grantsau & Lima, 2008, is a junior synonym of *Charadrius crassirostris* Spix, 1825**

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SUMMARY.—We demonstrate that the recently described *Charadrius wilsonia brasiliensis* Grantsau & Lima, 2008, is a junior synonym of *Charadrius crassirostris* Spix, 1825. The type locality of the latter taxon is 'Brasilia' [=Brazil] and most probably was collected at Ilhéus in the state of Bahia, north-east Brazil.

Wilson's Plover *Charadrius wilsonia* is a medium-sized wader distributed along coasts of North, Central and South America. In all plumages, the bill is black and heavy in appearance, the upperparts are greyish to greyish brown, the underparts white, with a black to brownish breast-band, and the legs pinkish to pinkish grey. In breeding adults, the breast-band, lores and forecrown are black in males, but grey-brown tinged rufous in females. Non-breeding adults are similar to breeding females, but lack any rufous tones. Geographic differences in the coloration of the upperparts, face and head patterns, and width of the breast-band has led to the recognition of at least three subspecies. *C. w. wilsonia* Ord, 1814, breeds along Atlantic and Gulf coasts of North and Middle America south to Belize, as well as in the Bahamas and northern Lesser Antilles, and is thought to spend the non-breeding season along the Gulf coast south to Brazil. *C. w. beldingi* (Ridgway, 1919) breeds along the Pacific coast from central Baja California to Panama, and in north-west Peru, whilst *C. w. cinnamominus* (Ridgway, 1919) is resident from north-east Colombia to French Guiana, and on islands off Venezuela north to the Lesser Antilles (Hayman *et al.* 1986, Piersma & Wiersma 1996, Corbat & Bergstrom 2000).

Ord (*in* Wilson & Ord 1814: 77–78, pl. LXXIII: fig. 5) described and illustrated *C. wilsonia* based on three specimens, two males and a female, collected 'on the shore of Cape May, New Jersey', USA. Ridgway (1919) proposed two new subspecies, originally named *Pagolla wilsonia beldingi* (pp. 108, 112) and *P. w. cinnamomina* (pp. 108, 113). Their type specimens originate, respectively, from La Paz in Baja California, Mexico, and Sabanilla in Colombia. The three races are similar, but the nominate lacks rufous in the plumage except on the ear-coverts. In *C. w. cinnamominus*, the crown is strongly rufous, males exhibit mixed rufous and black in the breast-band, and females are strongly gingery over the mask and breast-band. *C. w. beldingi* is darker above than the nominate, and has a broader mask, less white on the forehead, narrower supercilia and breast-band, and more rufous on the crown, nape and breast-band (see, e.g., Hayman *et al.* 1986, Piersma & Wiersma 1996).

Recently, Grantsau & Lima (2008) described a new subspecies of Wilson's Plover, based on three specimens, an adult male (holotype), adult female and an unsexed adult (paratypes), from a population breeding in north-east Brazil, naming it *C. w. brasiliensis*. According to them, *C. w. brasiliensis* closely resembles nominate *wilsonia* of the USA, but adult males have a narrower, blackish-brown, not black, breast-band, less black on the face and less rufous on the ear-coverts. Adult females also differ from the nominate form in having a grey-brown wash, not rufous, over the ear-coverts.

Aside from any discussion of validity and / or the taxonomic rank of *C. w. brasiliensis*, which is beyond the scope of this paper, as we will demonstrate, there is an available name,

Charadrius crassirostris Spix, 1825, which can be safely applied to those Wilson's Plovers breeding in Brazil.

The identity of the type specimen of *Charadrius crassirostris* Spix, 1825

In 1824–25, the German zoologist Johann Baptist von Spix published the two-volume *Avium species novae*, a large work in which he described many new bird species from Brazil. Spix (1825) described a plover under the name *Charadrius crassirostris*, as follows (cf. Appendix for original text in Latin).

'Small, upperparts brown verging on white, underparts white, collar and head blackish brown, forehead, supercilium, and middle of the neck white, beak thick toward apex'.

'Body hardly larger than that of *Tringa pusilla*, upperparts greyish brown, under parts white; head pale brownish, forehead and eyebrow white; throat white; collar above the chest blackish-brown, back and tertials of the wing pale brownish, remiges brown-black, white at base, rachis white; knee with a spinous tubercle, underside of wing totally white; tail not longer than wings, central rectrices brownish black, outer rectrices white; bill dark, hardly shorter than the head, thick at apex, cylindrical, subdentate; legs red, toes short. Body length $7\frac{1}{3}$ " [178 mm], tail 2" [50 mm], bill 10" [25 mm], tarsus 13" [33 mm], feet 2" [5 mm].' (Spix 1825: 77)

An illustration of *C. crassirostris* also appeared on plate XCIV of Spix (1825), which is reproduced here (in black and white) as Fig. 1. The bird described and illustrated by Spix (1825: 77, pl. XCIV) has a heavy, dark bill with both mandibles curving evenly to a dagger-like pointed tip, a white forehead continuous with the white supercilium, a white hindneck collar, greyish-brown upperparts, a blackish-brown breast-band and red legs. These characteristics clearly identify the bird as an adult *C. wilsonia* from the population breeding in north-east Brazil. Its measurements (i.e. total body length, bill, tail and tarsus) confirm the identification.

Two other *Charadrius* plovers occur in north-east Brazil, often sympatrically with Wilson's Plover: Semipalmated *C. semipalmatus* Bonaparte, 1825, and Collared Plovers *C. collaris* Vieillot, 1818 (e.g. Sick 1997, Fedrizzi 2003, Lima 2006, Albano *et al.* 2007). However, Semipalmated Plover possesses an overall darker, grey-brown back, a stubby, two-toned bill (base often orange-yellow), and orange-yellow legs and feet. Collared Plovers, in contrast, are smaller than Wilson's Plovers (14–15 cm vs. 16.5–20.0 cm in total length), have a slender,



CHARADRIUS crassirostris

Tab. XCIV

Figure 1. Reproduction in black and white of plate XCIV of Spix (1825) named *Charadrius crassirostris*.

all-black bill, flesh-pink to yellowish legs, and lack a white hindneck collar (Hayman *et al.* 1986, Piersma & Wiersma 1996).

Spix (1825) provided no detailed information on the number of specimens, type location or date of collection in his original description of *C. crassirostris*. However, because the original description is written in the singular, it appears reasonable to assume that it was based on a single specimen, which, according to Art. 73 of the *International code of zoological nomenclature* (ICZN 1999) would then be the holotype by monotypy.

Soon after joining the staff of the Museum of the Bavarian Academy of Sciences (now the Bavarian State Collection for Zoology) in 1903, Carl Eduard Hellmayr set himself to study thoroughly the collection of birds obtained by Spix in Brazil. This resulted in the publication, in 1906, of Spix's types of Brazilian birds, wherein he commented as follows (translated from the German) on a single specimen upon which the description of *C. crassirostris* was based.

'This bird is in complete accordance with specimens [of *Ochthodromus w. wilsonia* = *C. w. wilsonia*] from the south-east USA and by no means belongs to *O. w. rufinucha* (Ridgway). The periocular, head side and throat are dark as in various specimens from Florida, and only in the auricular region it exhibits a slight trace of rusty coloration. In *O. w. rufinucha*, of which I have a nice suite of specimens from Jamaica and Trinidad at hand, the head side and neck always have a clear ochre-rusty wash. Thus, Spix's type must have been a bird migrating from the north.' (Hellmayr 1906: 715)

Several years later, in his extensive revision of the ornithology of the north-east Brazilian states of Maranhão, Piauí and Ceará, Hellmayr (1929) compared two specimens, a male and a female, of *C. wilsonia* collected by the German ethnographer Emil-Heinrich Snethlage in Maranhão with the type of *C. crassirostris* and other specimens from North America and the Caribbean, and concluded:

'Like the type of *Charadrius crassirostris* Spix, with which it was directly compared, our male has but a few feathers behind the auriculars faintly tipped with pinkish cinnamon, while the jugular band, in both, is blackish, indistinctly edged with pale brownish. They are matched by numerous individuals from the United States and the Bahamas [...] The same applies to the female which differs from ten specimens of the Caribbean breeding race by the complete absence of any rufescent tinge whatsoever on head and jugular band, and cannot be distinguished from females of Wilson's Plover.' (Hellmayr 1929: 492)

Finally, Hellmayr & Conover (1948) commented, in a footnote, on some specimens of *C. wilsonia* collected in Brazil:

'Eight specimens taken in winter (between September and April) on the coast of Brazil agree well with the type of *C. crassirostris*, and, while matched by numerous individuals from the United States, look very different from *C. w. cinnamominus* [...] Five (out of six) Brazilian females have the jugular band entirely grayish brown and no rufescence whatsoever on sides of head, while the sixth individual shows a slight rusty tinge on both these parts, the series being thus exactly similar to females from the United States.' (Hellmayr & Conover 1948: 75)

From the information above, it is clear that the closer resemblance to Spix's type with specimens of Wilson's Plover from the USA led Hellmayr (1906) to regard *C. crassirostris* as a synonym of *C. wilsonia*, contra Grantsau & Lima (2008) who stated that Hellmayr offered no rationale for his opinion. Also note that Hellmayr (1906, 1929) thought that Wilson's Plovers specimens collected in Brazil were migrants from North America.

Status of Wilson's Plover in Brazil and *Charadrius wilsonia brasiliensis* Grantsau & Lima, 2008

The status of *C. wilsonia* in Brazil has attracted some debate. Initially, the species was assumed to be a migrant from North America, and thus the birds belonged to the nominate subspecies, because no evidence of breeding in Brazil existed prior to the late 1980s (e.g. Hellmayr 1906, 1929, Hellmayr & Conover 1948, Pinto 1938, 1964, 1978, Pinto & Camargo 1961, Sick 1985). However, since the early 1990s, breeding data for *C. wilsonia* along north and north-east Brazilian coasts have accumulated (Rodrigues *et al.* 1996, Sick 1997, Fedrizzi 2003, Lima 2006, Albano *et al.* 2007, Grantsau & Lima 2008, Lunardi & Macedo 2010). Today, it is well established that birds breeding in Brazil do not exhibit any seasonal variation in abundance, being always observed in small numbers year-round, and a ringed *C. wilsonia* from North America has never been recovered there (e.g. Lara-Rezende 1982, Azevedo-Júnior *et al.* 2001, Fedrizzi 2003, Schulz-Neto *et al.* 2008, Mestre *et al.* 2010). Wilson's Plovers are regarded as a 'not completely migratory species'; some remain in the nesting areas all year, while others are short-distance migrants (Corbat & Bergstrom 2000). The evidence currently available does not support the view that North American birds reach Brazil.

At the tenth Brazilian Congress of Ornithology, held in Fortaleza on 3–8 November 2002, Rolf Grantsau, Pedro C. Lima and two other colleagues presented a poster, wherein they postulated that the breeding population of *C. wilsonia* in north-east Brazil represents a distinct taxon, for which the name *C. crassirostris* Spix, 1825, is available. Grantsau and his colleagues explicitly stated that Spix's (1825) description of *C. crassirostris* matched specimens of '*C. wilsonia*' from north-east Brazil. Although not valid from a taxonomic or nomenclatural standpoint, the abstract, published in the congress booklet, proposed revalidating *C. crassirostris* as a subspecies of *C. wilsonia* (Grantsau *et al.* 2002). Subsequently, Lima *et al.* (2002) even referred to Wilson's Plovers breeding in the state of Bahia, north-east Brazil, as *C. w. crassirostris*. Quite surprisingly, in describing their 'new subspecies', Grantsau & Lima (2008) rejected the name *C. crassirostris*, stating that Spix's type cannot be certainly identified because it is no longer extant, and because no locality was given in its description. However, the locality ('Brasilia') was given and the type has been found.



Figure 2. Lateral and ventral views of the type specimen of *Charadrius crassirostris* Spix, 1825, in the Bavarian State Collection of Zoology, Munich, Germany (© Markus Unsöld, Bavarian State Collection of Zoology)

The building of the Bavarian State Collection of Zoology was severely damaged during World War II, and the specimen used by Spix (1825) to describe *C. crassirostris* was thought to be lost, as can be inferred from Reichholf (1983). Even if true, Spix's (1825) original description and accompanying plate, together with the information subsequently provided by Hellmayr (1905) would be sufficient to identify the type of *C. crassirostris*. However, the type specimen of *C. crassirostris* is still extant in the collection of the Bavarian State Collection for Zoology (Fig. 2) and there is no doubt that the birds described by Spix (1825) and Grantsau & Lima (2008) refer to the same taxon; consequently:

Charadrius wilsonia brasiliensis Grantsau & Lima, 2008
= *Charadrius crassirostris* Spix, 1824, **syn. nov.**

Doubts persist concerning the precise collection locality of Spix's specimen. Regrettably, Spix did not record such localities for most of his specimens, either in his *Avium species novae* or on his labels. The records, in many cases as here, simply state 'Brasilia' as the place of collection. Good information, however, exists concerning the route followed by Spix, and his colleague, the botanist Carl Friedrich Philipp von Martius, during their 1817–20 expedition to Brazil (Papavero 1971, Spix & Martius 1981, Paynter & Traylor 1991, Vanzolini 1992). Most time was spent at inland localities in the dry Caatinga (xeric shrubland and thorn forests) and Cerrado, but they remained in coastal Bahia between November 1818 and February 1819, and also collected specimens on the coasts of Maranhão and Pará in July 1819. It is reasonable to assume that the type of *C. crassirostris* was taken somewhere on the coast in one of these three states, but most probably at Ilhéus (14°49'S, 39°02'W; Paynter & Traylor 1991) in coastal Bahia, where Spix and Martius stayed for about two months.

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Appendix: original description of *Charadrius crassirostris* Spix (1825: 77)

Species I. CHARADRIUS CRASSIROSTRIS. Tab. XCIV.

Minor, supra brunneo canescens, subtus albus; collari capiteque fuscis: fronte, superciliis colloque medio albis; rostro versus apicem crasso.

Descriptio. Corpus *Tringa pusilla* vix maius, supra fusco-canescens; subtus album; caput pallide brunnescent, fronte, genis superciliisque albis; gula collarique albis; lora collareque supra pectus fusco-brunnea; dorsum tectricesque alarum albicanti-brunnescentes; remiges nigro-fuscae, basi albae, scapis albis, axillae spinoso-tuberculatae, alae subtus totae albae, cauda alis haud maior, rectricibus internis nigro-brunneis, externis albis; rostrum fuscum, capite fere brevius, verus apicem crassum, cylindricum, subdentatum; pedes rubris; digitus brevibus.



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