

WILLET (*TRINGA SEMIPALMATA*) STATUS UPDATE IN SOUTHEASTERN SOUTH AMERICA

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Resumen. – Actualización del estatus del Playero Ala Blanca (*Tringa semipalmata*) en el sudeste de Sudamérica. – Se reevaluó el estatus del Playero Ala Blanca (*Tringa semipalmata*) en el sudeste de Sudamérica, sobre la base de nuevas observaciones, revisiones de literatura y de bases de datos ornitológicos en línea. Pese a los escasos reportes previos, nueva información sugiere que el Playero Ala Blanca es de presencia regular, si bien en bajos números, en la región. En el área se registraron tanto la subespecie oriental (*T. s. semipalmata*) como la occidental (*T. s. inornata*), lo cual extiende hacia el sur el rango conocido de distribución no reproductiva del Playero Ala Blanca Occidental: reportando nuevos registros para la Provincia de Buenos Aires en Argentina, los Departamentos de Montevideo y Maldonado en Uruguay y el Estado de Rio Grande do Sul en Brasil. Confirmamos la presencia del Playero Ala Blanca Oriental por primera vez en Uruguay y proporcionamos nuevos registros de esta subespecie para Argentina y Brasil. Finalmente, aportamos los primeros registros de sobre-veraneantes de las razas Oriental y Occidental para el cono sur.

Abstract. – We reevaluated the status of Willets (*Tringa semipalmata*) in southeastern South America on the basis of new observations and reviews of literature and on-line ornithological databases. Despite relatively few previous reports, our new data indicate that Willets are regularly present in low numbers in the region. Both Eastern (*T. s. semipalmata*) and Western (*T. s. inornata*) Willet subspecies were recorded in our study area. We extended the Western Willet's known wintering range southward reporting new records from Buenos Aires province in Argentina, Maldonado and Montevideo departments in Uruguay, and Santa Catarina and Rio Grande do Sul states in Brazil. We confirmed the presence of Eastern Willet for the first time in Uruguay and added new reports for Argentina and Brazil. Finally, we provided the first records of over-summering Western and Eastern Willets remaining in southeastern South America during the Austral winter. *Accepted 3 July 2014.*

Key words: Willet, *Tringa semipalmata inornata*, *Tringa semipalmata semipalmata*, Migration, shorebird, over-summering, salt marsh.

INTRODUCTION

The Willet (*Tringa semipalmata*) is a Nearctic migratory shorebird with two recognized subspecies: the Eastern (*T. s. semipalmata*) and Western Willets (*T. s. inornata*; Lowther *et al.* 2001). The taxonomic status of these two races remains unresolved. Douglas (1998) hypothesized that these taxa have attained an intermediate stage in speciation, while O'Brien (2006) asserted that the two populations are morphologically and ecologically distinct and meet most criteria for separate species, although DNA studies are needed. Haig *et al.* (2002) described Western Willets as comprising distinct populations which may be subspecifically distinct.

Eastern Willets breed in salt marshes and mangroves along the Atlantic and Gulf coasts from Newfoundland, Canada to Mexico and some locations within the Caribbean (Tomkins 1965, Howe 1982, O'Brien *et al.* 2006). Western Willets breed within the Great Plains and Prairie Wetlands in northern United States and Canada (Tomkins 1965, Howe 1982, Haig *et al.* 2002). In South America the non-breeding ranges of the two subspecies are not fully known, including whether they overlap or not (O'Brien *et al.* 2006, Chandler 2009). Eastern Willets migrate south along the Atlantic Coast into the Caribbean and northern South America, reaching Suriname and northeastern Brazil (Tomkins 1965, Morrison & Ross 1989, Piersma *et al.* 1996). Some individuals may also winter south to Uruguay and Argentina (O'Brien *et al.* 2006, Simpson & Simpson 2011). According to Tomkins (1965) and Piersma *et al.* (1996), most Western Willets winter along the eastern coasts of the United States and Gulf of Mexico, but some may continue south through the Atlantic seaboard into the Caribbean and down to Suri-

nam. Small numbers also migrate along the Pacific Coast and can be found from northwestern United States to Peru and Chile during the boreal winter (Tomkins 1965, Piersma *et al.* 1996).

There are infrequent records of the Willet in southeastern South America, where its status varies from vagrant to regular (Belton 1994, Jaramillo 2000, Roesler *et al.* 2004, Azpiroz *et al.* 2012). Willets have been considered occasional (Canevari *et al.* 1991, 2001) or "probably accidental" in Buenos Aires province (Narosky & Di Giacomo 1993) but in the light of recent records, some authors have suggested that Willets might be regular visitors in small numbers in Buenos Aires (Jaramillo 2000, Roesler *et al.* 2004). In Brazil, this shorebird is considered an uncommon visitor, with records along the coast (Sick 1997). The species is more frequent and abundant in coastal mangroves of the northern and northeastern regions (Morrison & Ross 1989, Simpson & Simpson 2011). In southeastern and southern Brazil it is known from a few records (Belton 1994, Cremer & Grose 2010, Simpson & Simpson 2011). In Uruguay, there are only three reports that provide details of four records in three localities (Gambarotta *et al.* 1987, Gil 2011, Azpiroz *et al.* 2012).

There is little information about Willet non-breeding areas in southern South America. Because Willet subspecies are morphologically very similar, records should be carefully examined to determine their distributional patterns (Simpson & Simpson 2011). Among the previously published reports of Willets in southeastern South America, however, only two discriminate between subspecies (Belton 1973, Roesler *et al.* 2004). Advances in field identification of subspecies (see O'Brien 2006, O'Brien *et al.* 2006) provide new tools to achieve this goal. The aims of this contri-

bution are to reevaluate the status of the Willet in southeastern South America on the basis of new available information and to determine the subspecific identity of recorded individuals.

METHODS

Our study area covers the southern part of Santa Catarina (south of Laguna municipality, 28°29'S, 48°47'W) and Rio Grande do Sul states in Brazil, Buenos Aires province in Argentina and Uruguay. The region is characterized by coastal grasslands and forests with estuaries and bays with salt marshes. We reviewed the literature and online ornithological databases (eBird, EcoRegistros, WikiAves, Wiki Aves, Xenocanto) and included our own novel observations based on shorebird counts in August 2010 (single count), December 2011, March, April, May, and June 2012 (weekly counts), and March, June, and July 2013 (monthly counts) at southern end of Bahía Samborombón, Buenos Aires, Argentina, and repeated visits to Molhe Oeste and Lagoa do Peixe in Rio Grande do Sul, Brazil. Whenever possible, we identified published and unpublished photographic material to subspecific status following identification criteria in O'Brien (2006) and O'Brien *et al.* (2006). According to these authors, Eastern Willets are smaller (nearly as small as a Greater Yellowlegs, *Tringa melanoleuca*) and have slimmer bodies than Western Willets (which are about the size of a Hudsonian Godwit, *Limosa haemastica*). Furthermore, Eastern Willets tend to look more compact, shorter-legged, shorter-necked and have a thicker, and usually less straight-edged bill, showing a more distinct gonydeal bulge and sometimes a slight droop (both much more subtle, if present, on Western) than their Western counterparts (O'Brien 2006, O'Brien *et al.* 2006). Western Willets have more elongated bodies with longer legs and neck and

slimmer, straighter-edged and finer-tipped bills (O'Brien 2006, O'Brien *et al.* 2006). Concerning basic-plumaged individuals, Eastern Willets are slightly darker, particularly on the crown and tertials, and browner overall, while Western Willets are typically very pale and grayish, often with a distinctive blue-gray tone on tertials (O'Brien 2006, O'Brien *et al.* 2006). Despite these differences, some overlap is likely. In alternate plumage, Eastern Willets are brownish overall and Western Willets have neutral gray upperparts and pale buff breast (Fig. 1; O'Brien 2006, O'Brien *et al.* 2006, O'Brien pers. comm.). After assigning individuals in photographs to subspecies, we solicited expert opinion (M. O'Brien) to confirm our preliminary identifications. We also reported published and unpublished visual records for which no photographic material was obtained, but these records were not assessed at the level of subspecies. Finally, we provided sources for all published materials, including photographs in online databases.

RESULTS

From 1973 to 2013 Willets were observed on 46 occasions within our study area (Table 1). In this work, we were able to identify Eastern and Western Willets on 13 and 12 occasions, respectively. There is documented evidence of the presence of both subspecies in all three countries as detailed below.

Argentina. The first Willet report for Buenos Aires province was an undocumented observation in Punta Rasa (Canevari *et al.* 1991); no details (numbers, date) were provided. Since then, Willets were observed in 29 occasions, 24 of them in the last four years. Among these, seven records were published in the literature (Jaramillo 2000, Roesler *et al.* 2004, Argerich *et al.* 2011), three in on-line data bases (García Vicente 2011, Ragonesi 2011,



FIG. 1. A) Pair of Willets observed at Bahía Samborombón, Buenos Aires, Argentina, in June 2012 (Photo: G. Battaglia). The birds show differences in structure, color, and size that are compatible with Eastern and Western Willet characteristics. The bird on the right is paler, has godwit-like appearance, looks larger, shows a longer neck, slimmer and longer bill and a steeper angle from the bill to the forehead. The bird on the left looks browner, smaller and more compact, has a shorter bill and neck and a shallower angle from the bill to the forehead (O'Brien 2006). B) Silhouettes showing typical differences in habitus between Eastern (*Tringa semipalmata semipalmata*, left) and Western (*T. s. inornata*, right; adapted from O'Brien 2006 and reproduced with his permission).

Polverini 2012, Teran 2013), and 19 are novel observations (Table 1). Only Roesler *et al.* (2004) discriminate between subspecies, reporting the first Eastern Willet for the region based on an individual in breeding plumage. Among all the observations, 17 lack photographic support, and for the remaining 12 there is photographic evidence for at least one of the observed birds. We were able to

identify both Eastern (six occasions) and Western (seven occasions) Willets. On one occasion, the subspecific status was doubtful because of the low quality of the photograph, and we were only able to say that the bird was possibly an Eastern Willet (Table 1). Willets were found throughout the year (Austral summer and winter) as singles, pairs, or small groups, and the maximum count involved

four birds. Bahía Samborombón was the locality with most frequent observations, at which Willets were often seen with Hudsonian Godwits feeding on mudflats during low tide and moving to nearby shallow brackish lagoons to rest during high tides.

Brazil. Within our study region, the first report of this species was based on the observation of two individuals in December of 1971; one of them was collected and assigned to the Eastern subspecies (Belton 1973). Nine years later, an undocumented and uncertain record of two individuals was made at Taim, in Rio Grande municipality (Belton 1994). The species was also listed by Nascimento (1995) for Lagoa do Peixe National Park, information apparently repeated in Nascimento (2011), but without any details concerning subspecies, dates or number of individuals observed. From 2004 to 2013, there have been 12 Willet records throughout our study area in southern Brazil. We were able to assign subspecific status to nine of the observed birds; Eastern and Western Willets were observed in five and four occasions respectively. In the case of five individuals, we could only tentatively identify them as Western Willets (Table 1). Within this region, Willets were observed in all months from April to December in sandy oceanic beaches and estuarine areas. Localities with frequent observations (Laguna, Lagoa do Peixe and Lagoa dos Patos) are all located in estuaries with both salt marshes and tidal flats present. Most records involved singles or pairs, except those from the Molhe Oeste salt marsh, at the mouth of the Lagoa dos Patos, where two to three individuals were found in tidal pools in September 2008 and June 2011 (Table 1). It is noteworthy that during repeated visits to the Molhe Oeste salt marsh during 2007 and 2008, Willets were only found from August to November 2007 and in September 2008.

Uruguay. Regarding the subspecies identity of Willets reported from Uruguay, Azpiroz (2001) cited *semipalmata* while Claramunt & Cuello (2004) tentatively listed *inornata* (i.e., a question mark follows the subspecies name in the latter publication). These sources, however, do not provide details to back up these assertions. Later, Azpiroz *et al.* (2012) indicated that one of the Willets seen in 2008 (Maldonado) showed some characteristics of *inornata* but subspecific identity was not confirmed. All three recent (2008-2009; Gil 2011, Azpiroz *et al.* 2012) Willet observations in Uruguay have been documented with photographs. The re-analysis of this material revealed that individuals of both subspecies have been observed in the country: a single bird found in Maldonado (Azpiroz *et al.* 2012) belonged to *inornata* while birds seen in Montevideo in 2008 (A. Mello in Azpiroz *et al.* 2012) and 2009 (Gil 2011) were referred to *semipalmata* and *inornata*, respectively (Table 1).

DISCUSSION

Establishing the geographic range of species has important implications for ecology and conservation (Motta-Vargas & Rojas-Soto 2011). In the past, Willets were considered “occasional” or “probably accidental” in southeastern South America (Narosky & Di Giacomo 1993, Belton 1994, Azpiroz 2001, Canevari *et al.* 2001). Our data, however, support the view that Willets currently occur on a regular basis in small numbers in southeastern South America (Jaramillo 2000, Roesler *et al.* 2004), and indicates that the species is regularly present in the area and might be recorded locally in small numbers throughout the year.

This study extends the known non-breeding range of the Western Willet southwards. Ours are the first records of this taxon in the region (including observations in

TABLE 1. Summary of published (*) and new records of the Willet (*Tringa semipalmata*) in southeastern South America. Eastern Willet (*T. s. semipalmata*) and Western Willet (*T. s. inornata*) subspecies were identified whenever possible. For daily counts at a given site, only maximum number of individuals observed simultaneously is reported. (E: Eastern Willet, W: Western Willet, PE: Possible Eastern Willet, PW: Possible Western Willet, X: no photographic evidence or doubtful identification).

No. individuals	Subspecies	Date	Location	Authors
ARGENTINA				
1	X	27–29 Dec 1991	Punta Rasa, Bahía Samborombón (= BS; 36°17'57"S, 56°46'27"W)	Jaramillo 2000*
1	X	7 Jan 1992	Punta Rasa, BS	Jaramillo 2000*
3	1 E*, 2 X	30 Oct 1999	Punta Rasa, BS	Roesler <i>et al.</i> 2004*
?	X	20 Nov 1999	Punta Rasa, BS	Roesler <i>et al.</i> 2004*
1	X	4 Sep 2000	Punta Rasa, BS	Roesler <i>et al.</i> 2004*
3 or 4	3 E	12 Aug 2010	Arroyo San Clemente, BS (36°19'8"S, 56°46'30"W)	This work (NSMC, ABA)
1	E	13 Aug 2010	Arroyo San Clemente, BS	This work (NSMC, ABA)
1	W	21 Jul 2011	Mar Chiquita (37°44'18"S, 57°25'48"W)	García Vicente 2011, Ragonesi 2011
1	W	23 Jul 2011	Mar Chiquita	Argerich <i>et al.</i> 2011*
1	W	24 Sep 2011	Punta Rasa, BS	Argerich <i>et al.</i> 2011*
2	X	5 Dec 2011	Arroyo San Clemente, BS	This work (NSMC, ABA)
1	X	17 Dec 2011	Arroyo San Clemente, BS	This work (NSMC, ABA)
1	X	21 Dec 2011	Arroyo San Clemente, BS	This work (NSMC, ABA)
2	X	26 Dec 2011	Arroyo San Clemente, BS	This work (NSMC, ABA)
2	2 W	11 Mar 2012	Arroyo San Clemente, BS	This work (NSMC)
1	X	25 Mar 2012	Punta Rasa, BS	This work (NSMC, ABA)
4	3 PE, 1 X	31 Mar 2012	Arroyo San Clemente, BS	This work (NSMC, ABA)
3	1 E, 2 X	13 Apr 2012	Punta Rasa, BS	This work (NSMC)
1	E	21 Apr 2012	Punta Rasa, BS	Polverini 2012
1	X	30 Apr 2012	Arroyo San Clemente, BS	This work (NSMC)
1	X	11 May 2012	Arroyo San Clemente, BS	This work (NSMC, ABA)
2 or 4	X	17 May 2012	Arroyo San Clemente, BS	This work (NSMC)
2	X	22 May 2012	Arroyo San Clemente, BS	This work (NSMC)
4	X	28 May 2012	Punta Rasa, BS	This work (NSMC)
1	W	1 Jun 2012	Arroyo San Clemente, BS	This work (NSMC, ABA)
2	1 E, 1 W	21 Jun 2012	Arroyo San Clemente, BS	This work (NSMC, G. Battaglia, Fig. 1)
3	X	24 Jun 2012	Punta Rasa, BS	This work (NSMC)
1	W	11 Mar 2013	Arroyo San Clemente, BS	Terán 2013
2	2 E	25 Jul 2013	Arroyo San Clemente, BS	This work (NSMC)
BRAZIL				
2	1 E*, 1 X	16 Dec 1971	Arroio do Sal, Rio Grande do Sul (RGS; 29°29'S, 49°50'W)	Belton 1973*

TABLE 1. Continuation.

No. individuals	Subspecies	Date	Location	Authors
BRAZIL				
1	X	17 Sep 2004	Lagoa do Peixe, Mostardas, RGS (31°06'S, 50°50'W)	Senner 2004
1	X	Aug–Nov 2007	Molhe Oeste, Rio Grande, RGS (32°09'S, 52°06'W)	Dias <i>et al.</i> 2011*
1	W	20 Oct 2007	Lagoa do Peixe, Tavares, RGS (31°20'S, 51°02'W)	Dias 2007
3	3 PW	13 Sep 2008	Molhe Oeste, Rio Grande, RGS	Gianuca 2008a,b
2	1 W, 1 PW	29 May 2011	Praia do Gi, Laguna, Santa Catarina (SC; 28°27'S, 48°45'W)	Rupp 2011
2 or 3	1 E, 1 PW	13 Jun 2011	Molhe Oeste, Rio Grande, RGS	This work (RAD, RS, E. Simpson)
1	E	4 Jul 2011	Praia do Gi, Laguna, SC	Silva 2011
2	2 E	6 Jul 2011	Laguna, SC (28°29'S, 48°45'W)	This work (T. D. Silva in litt.)
1	E	11 Dec 2011	Estreito, São José do Norte, RGS (31°51'S, 51°43'W)	Agne 2011a, b, c
1	E	27 Apr 2012	Laguna, SC	Silva 2012
1	W	29 May 2013	Balneário Mostardense, Mostar- das, RGS (31°09'S, 50°48'W)	Ritter 2013a
1	W	01 Aug 2013	Molhe Oeste, Rio Grande, RGS	Ritter 2013b
URUGUAY				
1	X	29 Mar 1987	Playa Penino, San José	Gambarota <i>et al.</i> 1987*
1	W	30 Nov 2008	La Estacada, Montevideo (34°55'28"S, 56°09'03"W)	A. Mello in Azpiroz <i>et al.</i> 2012*
1	W	27–28 Dec 2008	José Ignacio, Maldonado (34°50'46"S, 54°37'57"W)	Azpiroz <i>et al.</i> 2012*
1	E	15 Oct 2009	Punta Carretas, Montevideo (34°55'30"S, 56°09'00"W)	Gil 2011*

Buenos Aires, Uruguay and Rio Grande do Sul). We also confirmed the presence of Eastern Willets in Uruguay based on the analysis of previously published photographic material. Given that there may be distinct populations within Western (Haig *et al.* 2002) and Eastern (O'Brien pers. comm.) Willets, further studies are needed to determine the status of these populations in South America.

Finally, we provide the first records of Willets remaining in southeastern South

America during the Austral winter (i.e., “over-summering”). Over-summering refers to “boreal-breeding birds which fail to migrate north and remains in the south far away from its breeding region during the boreal summer” (McNeil *et al.* 1994). This is a particularly frequent phenomenon in the Charadriidae and Scolopacidae (McNeil *et al.* 1994), and has been reported for other shorebird species in the region (Belton 1984, Blanco *et al.* 1992). Sexual immaturity, and poor pre-migratory

physiological or health conditions have been proposed to explain this situation (Lofing 1962, McNeil *et al.* 1994, McNeil *et al.* 1995). In the case of Willets in southeastern South America, more data are needed to shed light on this issue.

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