

First record of *Himantopus mexicanus mexicanus* and notes on breeding of *H. m. melanurus* in Paraguay

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The Black-winged Stilt *Himantopus himantopus* superspecies consists of one to five species, with a near cosmopolitan distribution in warmer regions (Sibley & Monroe 1990, Pierce & Kirwan 2020, Robinson *et al.* 2020). There are two phenotypic forms in the Americas: Black-necked Stilt *Himantopus [himantopus] mexicanus* and White-backed Stilt *H. [h.] melanurus*. These are variably considered distinct species (Sibley & Monroe 1990, Ridgely & Greenfield 2001), *melanurus* a subspecies of *mexicanus* (Hayes 1995, Remsen *et al.* 2019, Robinson *et al.* 2020, this paper), or both as subspecies of the globally widespread Black-winged Stilt (Meyer de Schauensee 1970, Blake 1977, Hayman *et al.* 1991).

Distribution in the Americas is broad. Black-necked Stilt ranges from extreme southern Canada, where it is accidental, through western and southern USA, Central America and the West Indies to northern South America (south to northwestern Bolivia, west of the Andes in Peru, and northeastern Brazil east of the Andes; Godfrey 1976, Lunardi *et al.* 2015, Herzog *et al.* 2017, Robinson *et al.* 2020). White-backed Stilt occurs in central and southern South America, from east-central Peru south to Chile and Bolivia, through Paraguay and southern Brazil to south-central Argentina (Herzog *et al.* 2017, Robinson *et al.* 2020). The two subspecies apparently occur in limited sympatry in Peru, northwestern Bolivia and central Brazil, where some hybridization may occur (Schulenberg *et al.* 2007, Gwynne *et al.* 2010, Herzog *et al.* 2017).

The Black-necked Stilt and White-backed Stilt are relatively easy to separate in the field. Black-necked Stilt has a black crown, sides of head, hind neck and upper back (Fig. 1a,b), whereas the White-backed Stilt has a mostly white crown and a white collar separating the black hind neck from the black mantle (Fig. 1c; Blake 1977). A white patch behind the eye of Black-necked Stilt is also characteristic and helps in separating them in the field from the superficially similar immature of White-backed Stilt which shows a blackish/greyish crown (Fig. 1d) instead of white, and a greyish instead of white collar on the upper back (Schulenberg *et al.* 2007).

In Paraguay, the White-backed Stilt is abundant in wetlands throughout the country but is most common in the Chaco region west of the Paraguay River (Guyra Paraguay 2004, 2005). Here, flocks of up to 10,000 individuals have been reported in the saline lagoons of the Upper Yacaré

Sur watershed, Presidente Hayes department, in the central Chaco (Clay *et al.* 2004). The species is considered resident in Paraguay (de Azara 1805, Guyra Paraguay 2005). Monitoring data suggests that it might be a partial migrant (Blanco *et al.* 2020). However, a study on seasonality at Bahia de Asuncion, Central department, showed no significant relationship between water level and abundance, in contrast to Nearctic migrant shorebirds (Lesterhuis 2015).

Virtually nothing is known regarding the breeding behaviour of the Black-winged Stilt in Paraguay. Laubmann (1939) reported it as a breeding species but gave no specific details. De la Peña (2010) also assumed breeding in the country, providing a nest photo and giving the breeding season as September to February. However, this assumption was based on data from neighbouring regions and the photograph of a nest was taken in Argentina. Beyond the frequent observation of immature birds in the central Chaco, which could conceivably have fledged elsewhere, no concrete evidence of breeding has been reported. In this paper, we provide the first documentation of breeding by the species, as well as the first report of the subspecies *mexicanus* in Paraguay.

First record of Black-necked Stilt

On 28 July 2016, R.P. Clay and P. and M. Faucher observed and photographed (Fig. 1a,b) a Black-necked Stilt at Laguna Capitán, Presidente Hayes department (22°32'S, 59°40'W). The single individual was in a flock of foraging White-backed Stilts, but easily recognized by the solid black upper back, a nearly full black crown, and the characteristic white patch behind the eye. The mantle was washed brown, indicating a female. As the fore-crown showed some greyish wash, the bird may have been a first-year. While many immature White-backed Stilts have a darker upper back than adults, they show at least a 'ghost' of the white collar typical of adults of the form (Fig. 1d). To date this is the only report of *H. m. mexicanus* from Paraguay.

Breeding of White-backed Stilt

An active nest with three eggs was found in a flooded rice field at Establecimiento Agroindustrial 'El Desafío' (27°03'S, 56°37'W), Itapúa department, in the Oriental region on 14 October 2014 by A.J. Lesterhuis, H. del

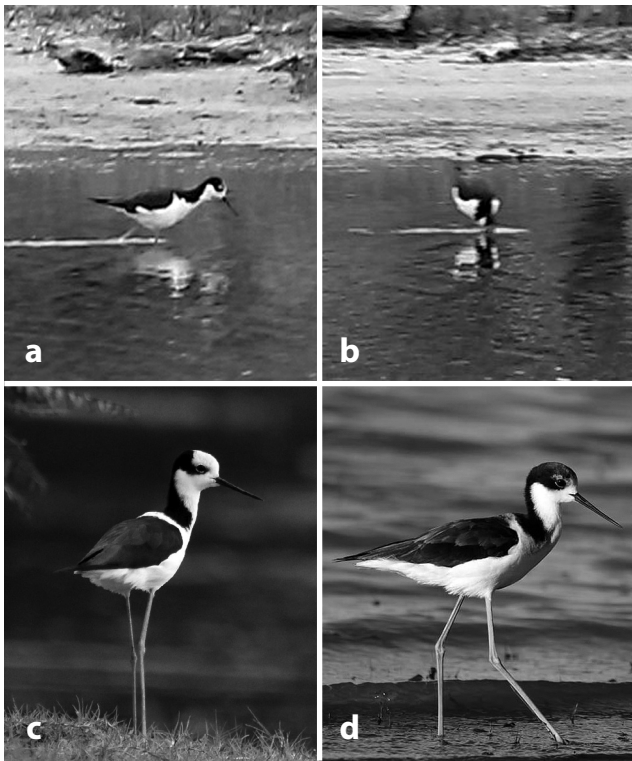


Fig 1. Black-necked Stilt *Himantopus mexicanus mexicanus* at Laguna Capitán, Presidente Hayes department, on 28 July 2016, showing the (a) typical head pattern and (b) complete black upper back. (c) Adult White-backed Stilt *H. m. melanurus* showing the white crown and white back, and (d) immature White-backed Stilt showing a blackish/greyish crown, instead of white, and greyish collar on upper back (photos: R.P. Clay [a,b], Sergio Rios [c,d]).

Castillo and L. Sforza. The nest, a shallow cup lined with dried grass (Fig. 2a), was located on a small stretch of higher, grassy mud within a mostly flooded field, and contained three brownish eggs, heavily blotched with dark brown (Fig. 2a,b). An adult bird was flushed from the nest upon approach but remained close by whilst emitting an alarm call as the nest was examined.

Two pairs of adults, both with two recently fledged juveniles, were observed in a largely dry rice field at Estancia 'La Graciela' (26°35'S, 56°49'W), Misiones department, in the Oriental region on 14 August 2019 by R.P. Clay and S. and M. Nunnally. All four juveniles had very new plumage, with obvious pale fringes to the upperpart feathers, very pale pink legs, and incompletely grown bills and, unlike the adults, did not fly on approach.

Three chicks (Fig. 2c) in downy plumage, accompanied by two adults, were observed at a roadside lagoon (22°28'S, 59°50'W) approximately 13 km due south of Loma Plata, Presidente Hayes department, in the Chaco region on 30 September 2019 by P. Smith. The chicks were estimated to be no more than two weeks old and incapable of flight, confirming that they had been born in the vicinity.

The breeding records documented here confirm that White-

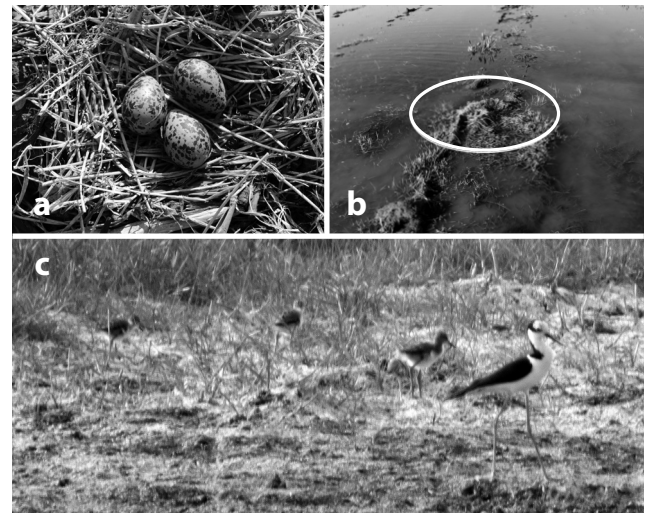


Fig 2. Breeding evidence for White-backed Stilt *Himantopus mexicanus melanurus* in Paraguay. (a) Nest and (b) location of the nest in the flooded ricefield at Establecimiento Agroindustrial 'El Desafío', Itapúa department, on 14 October 2014. (c) Adult and three chicks 13 km south of Loma Plata, Presidente Hayes department, on 30 September 2019 (photos: A.J. Lesterhuis [a,b], P. Smith [c]).

backed Stilt breeds in both the Oriental and Occidental regions of Paraguay. No other breeding data are available for Paraguayan birds, but Steinbacher (1962) reported that three specimens taken at Orloff, central Paraguayan Chaco, during March of 1956 and 1957 did not have enlarged gonads and thus were not actively breeding.

Although the species is generally thought of as being a (semi-)colonial breeder like other species of the family Recurvirostridae (Johnsgard 1981, Lunardi *et al.* 2015, Pierce & Kirwan 2020, Robinson *et al.* 2020), in Argentina it has been described as a solitary breeder that occasionally breeds in small colonies (Canevari *et al.* 1991). In Brazil, solitary nests have been reported (Olmos *et al.* 2005) and two of the observations in Paraguay apparently relate to solitary, as opposed to semi-colonial, breeding attempts. The occasional abundance of the species in Paraguay, coupled with the paucity of breeding reports, suggests that breeding in the country may be opportunistic, in response to favourable local conditions. Based on the limited data available, the breeding season appears to extend from July to February, which is slightly longer than that suggested by de la Peña (2010).

Apart from a handful of coastal records from São Paulo State, Brazil (<https://www.wikiaves.com.br/>), the record of the Black-necked Stilt in Paraguay is one of the most southerly in South America. In the neighbouring states of Brazil (i.e. Mato Grosso do Sul and Paraná), only White-backed Stilt has ever been recorded, and Black-necked has never been reported from Argentina (M. Pearman pers. comm.).

Though both Black-necked and White-backed Stilt occur sympatrically in Bolivia, only White-backed is known

from the areas bordering Paraguay. Black-necked is mostly confined to the Lago Titicaca region (La Paz department, northwestern Bolivia). However, Herzog *et al.* (2017) noted that the species is expanding southward, though they did not provide any data to support this observation. The individual observed in Paraguay is most likely a wandering bird and there is no reason yet to consider the Black-necked Stilt to be a regular visitor to Paraguay.

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