northward migration for careful dissection to reveal presence or absence of remnant cloacal bursae (Johnson 1985). Consistent correlations (i.e., small bursa plus variable numbers of faded secondaries = first-year bird; no bursa plus all new secondaries = adult) would essentially resolve the question. Notably, Pyle's description (Johnson & Connors 2010) of first basic plumage in this plover mentions only occasional retention of 1–4 juvenile secondaries. This further signals the need for additional studies to clearly identify first-year birds and also to examine moult in other regions of the nonbreeding range.

During a trip to Argentina by OWJ in 1999, Jorge Navas at the Museo Argentina de Ciencias Naturales, and Carlos Darrieu of the Museo de Ciencias Naturales de La Plata kindly allowed him to view plover specimens in their collections. Various of the birds examined appeared to be first-year individuals that were in primary moult when collected. These observations prompted the more conclusive investigation of live plovers reported in this paper. Fieldwork was mostly funded by the Canadian Wildlife Service, Manomet Center for Conservation Sciences, and the Southern Cone Grassland Alliance (BirdLife International initiative). Javier Vitancurt from the National System of Protected Areas provided additional logistical support. We are grateful to Martín Segredo and Tropicalia Farm for housing and access to the study areas. Catharinus Monkel, Héctor Caymaris, Verónica Correa, Macarena Sarroca, Diego Caballero, Daniel Sosa, Sofía Cortizas, Mariana Illarze, Nestor Leal, Andrés Sosa Huelmo, and Joaquín Lapetina assisted us in the field. We thank Charles Duncan and Diego Luna for ongoing support of shorebird studies and conservation at Laguna de Rocha. Helpful editorial suggestions from reviewer Les Underhill substantially improved the manuscript.

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## The occurrence of the Javan Plover Charadrius javanicus in Sumatra, Indonesia

## Muhammad Iqbal<sup>1</sup> & Iwan Febrianto<sup>2</sup>

<sup>1</sup>KPB-SOS, Jalan Tanjung api-api km 9 Komplek P & K Blok E 1, Palembang 30152, Indonesia. kpbsos26@yahoo.com <sup>2</sup>WCS-IP, Jl. Burangrang 18, Bogor 16151 – Indonesia, Indonesia. iwan\_londo@yahoo.com

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The taxonomic status of the Javan Plover *Charadrius javanicus* (Chasen 1938) is unclear, and it may not merit the status of a full species. However, different authors associate it with different species, and it has sometimes been treated as a race of Kentish Plover *C. alexandrinus*, or Red-capped Plover *C. ruficapillus* or Malaysian Plover *Charadrius peronii* (Piersma & Wiersma 1996). Tentatively Javan Plover is a distinct species (Piersma & Wiersma 1996), and this treatment has been followed by most recent authors (e.g. BirdLife International 2011, Inskipp *et al.* 1996, Mackinnon *et al.* 1998, Sukmantoro *et al.* 2007, Wetland International 2006). We follow this treatment, but whatever its taxonomic status, it is a distinct form that deserves to be fully monitored and conserved in its own right.

The entire population of the Javan Plover has been estimated at about 2,000 individuals and the species is endemic to coastal habitats on the islands of Java and Kangean and possibly also on Bali (Centurioni 2010, Mackinnon *et al.* 1998). There are no data on population trends (Wetland International 2006), but it may well be in decline as its habitats are subject to heavy disturbance by humans, especially during the breeding season; it is classified as Near Threatened (BirdLife International 2011).

Kennerley *et al.* (2008) reported that Javan Plovers breed at Penet, in Lampung province, Sumatra, which is information that was provided by second author (IF). Here, we report further detail on the occurrence of Javan Plovers at Penet, and an additional record for Sumatra from Bangka Island.

One day in July 2007 (date not recorded), an adult Javan Plover with two chicks was observed by IF in a dry fishpond on the east coast of Penet. Kuala Penet (Penet Bay) is a settlement on the east coast of Lampung Timur district (Fig. 1).



**Fig. 1.** Map showing the location of Penet and Pantai Pukan on Sumatra, Indonesia, where Javan Plovers were recorded in 2007 and 2011 respectively.

Many areas there are converted to fishponds (locally called "tambak"), but there is remaining mangrove forest and mudflats. When first seen, the adult was making repeated noisy calls, probably alarm calls, and the chicks were not visible; but after a few minutes the adult was seen with the chicks. The adult was later described by IF to MI who identified the bird as a Javan Plover from his experience of the species in Java.

On 31 March 2011 at 17h45, MI observed and photographed one Javan Plover on the sandy shore of Pantai Pukan or Pukan beach, Sungai Liat city, Bangka Island, Bangka Belitung province, Sumatra (02°02'06.1"S, 106°09'37.2"E, Figs 1 & 2). The bird was very similar to adult non-breeding or female breeding Kentish Plover and female Malaysian Plover, but it had less extensive white on the forehead, orange brown ear coverts and lores, a narrow white collar, and the scapulars, mantle and upperparts were a uniform mid sandy brown (Figs 3a & b). When viewed head-on, the bird showed medium-sized lateral breast-patches (Fig. 3b). The bill was long and dark, and appeared to be slimmer than the bill of Kentish and Malaysian Plover. The tibia was relatively long, and the tarsus was long and pale. The overall impression was of a bird that was sturdier than Kentish and Malaysian Plover. This combination of features is consistent with identification





Fig. 2. Pantai Pukan, Bangka Island, Sumatra, Indonesia, on 31 Mar 2011. (Photo: Muhammad Iqbal.)

as Javan Plover (Mackinnon et al. 1998, Piersma & Wiersma 1996).

The bird differed from adult non-breeding or female breeding Kentish Plover by orange-brown ear coverts and lores, long tibia, long pale tarsi and slim bill. Adult nonbreeding or female breeding Kentish Plovers lack rufous or orange-brown on the ear coverts and lores, and is roundheaded, short-legged and with a short slender black bill (Chandler 2009, Hayman et al. 1986). Female Malaysian Plover has rufous or orange brown ear coverts and lores, but is buff to whitish on the scapulars, mantle and upperparts, unlike the uniform mid sandy brown of Javan Plover (Bakewell & Kennerley 2008, Chandler 2009). To obtain additional confirmation of our identification, we provided details of our description and photographs to two people who are particularly familiar with Javan Plover, Bas van Balen and Khaleb Yordan. Bas van Balen is a well-known expert on the birds of Java and Indonesia; and Khaleb Yordan is familiar



Fig. 3. Javan Plover photographed on 31 Mar 2011 at Pantai Pukan, Bangka Island, Sumatra, Indonesia. (Photos: Muhammad Iqbal.)

and Khaleb Yordan is familiar with Javan Plovers on the north-east coast of Java and has contributed photographs of the species on *www.orientalbirdimages.org*. Both agree that the bird we recorded at Pantai Pukan, Sumatra, was a Javan Plover.

Javan Plovers are reported as breeding and foraging on sandy beaches, mudflats and adjacent open areas along coasts (BirdLife International 2011, Piersma & Wiersma 1996), and this is consistent with the two locations where we observed the species in Sumatra. The Penet site was a dry fishpond with mudflats and mangroves nearby; the Pukan beach site was a wide sandy beach, backed by pine trees.

Until recently it was believed Javan Plover was endemic to Java, but the species has recently been discovered on Sulawesi and Sumatra, and may possibly occur east of Java as well (Coates & Bishop 2000, Kennerley et al. 2008, White & Bruce 1986). There is no previous fully validated report of Javan Plover in Sumatra (Andrew 1992, 1993, Holmes 1996, Kukila 2000, Mackinnon et al. 1998, Marle & Voous 1988, Sukmantoro et al. 2007). Therefore these records of breeding at Penet and a bird at Pantai Pukan constitute the first confirmed occurrences of the species in Sumatra. In Wallacea, the species has been recorded as breeding in Sumbawa and Flores (Coates & Bishop 2000, White & Bruce 1986) and in Ujung Pandang, South Sulawesi (Tebb et al. 2008). There are also recent sightings from Makasar fish ponds (Sulawesi), Benoa (Bali), Menggitimbe (Sumba) and Labuan Bajo (Flores). Therefore it seems that the Javan Plover's total range stretches nearly 2,000 km from eastern Sumatra to Flores, although its main range is restricted to Java (Farrow & Robson 2009, Robson 2010).

A record of a Javan Plover from Kangean Island (130 km north of Bali) suggests the possibility of inter-island movements which may include adjacent parts of Wallacea (White & Bruce 1986). This also probably explains the occurrences at Penet and Pantai Pukan in eastern Sumatra. These sites are respectively 100 km and 430 km from Java, but the seacrossing between Java and Sumatra is only 20 km (Fig. 1).

It is quite possible that Javan Plovers occur regularly in eastern Sumatra and are overlooked. Few ornithologists visit the area and there is a lack of accessible good quality identification literature for local birdwatchers. We recommend that ornithologists pay more attention to Javan Plovers in SE Sumatra to provide further confirmation of the status of the species. Previously it was considered to be endemic to Java, but now with records from Sumatra, Java, Bali, Sumbawa, Flores and Sulawesi, it seems that its current status is that it is endemic to Indonesia. Further studies are needed to identify Javan Plover sites, monitor its population trend and determine its conservation status.

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