

## THE SHOREBIRDS OF BANGKA ISLAND, SUMATRA, INDONESIA

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Bangka Island is the second largest island in Sumatra, Indonesia. The island has a lengthy coastline and may provide important habitat for shorebirds during the migration period. There were 18 shorebirds species previously known from Bangka, and a most recent survey added three new species. This paper reviews all shorebird records from Bangka, including the recent discovery of endemic Javan Plover in the island on March-April 2011.

### INTRODUCTION

The island of Bangka, situated roughly between 1°10' - 3°10' S and 105°10' - 106°50'E, is located off the coast of Sumatra, Indonesia. The total area of the island is 11,340 km<sup>2</sup>, and is 245 km at its longest and approximately 70 km at its widest (in the south). The north coast is deeply indented by the shallow Klabat Bay, which penetrates almost 40 km inland. Bangka is separated from Sumatra by the shallow Strait Bangka, which at its narrowest point is no more than 14 wide and less than 20 m deep (Mees 1986). Previously, the island was administratively part of South Sumatra province but now together with Belitung Island, they form Bangka-Belitung province.

Bangka has a long coastline which has potential as shorebird habitat during migration period. The island is close to two sites on the mainland of Sumatra, which are listed by Bamford *et al.* (2008) as internationally important for migratory shorebirds. The first is Banyuasin Peninsular (South Sumatra province) approximately 35 km from Bangka Island and has a maximum total population up to 500,000 waders in the autumn (Verheugt *et al.* 1990), and the second is Cemara beach (Jambi province) approximately 130 km from Bangka Island and contains up to 20,000 waders in peak migration period (Tirtaningtyas & Philippa 2009).

Information on shorebirds of Bangka Island has been reported by Mees (1986) and Marle & Voous (1988). Unfortunately, this information only consists of species lists with very little actually known about distribution of key sites, population sizes, seasonal use, non-breeding versus breeding usage. A survey of waders was conducted on the east coast of Bangka Island during 26 March to 3 April 2011 and June 2011. During this survey, seven species of shorebirds were recorded. The occurrence of all species and population counts of shorebirds that have been recorded in Bangka Island is discussed here. It is hoped that this survey can encourage further study on shorebird populations along the entire coast of Bangka Island.

### METHODS

#### Study Area

Some sites on Bangka Island were visited from south to north during March to April and again in June 2011, but because the visits did not coincide with main migration times, shorebirds were recorded from only four sites (Figure 1). The sites are Sadai beach, Pukan beach, Mentok beach

and Rambat beach. Sadai beach is administratively located in Bangka Selatan district at 03°00'19.6" S, 106°44'20.6" E; Pukan beach is administratively part of Bangka district at 02°02'39.9" S, 106°09'33.0" E; Rambat beach is administratively part of located in Bangka Barat district at 01°53'48.2" S, 105°16'08.3" E and Mentok beach is administratively part of Bangka Barat district and geographically located at 02°01'10.0" S, 105°13'10.2" E. All sites are typically sandy beaches (Figure 2).

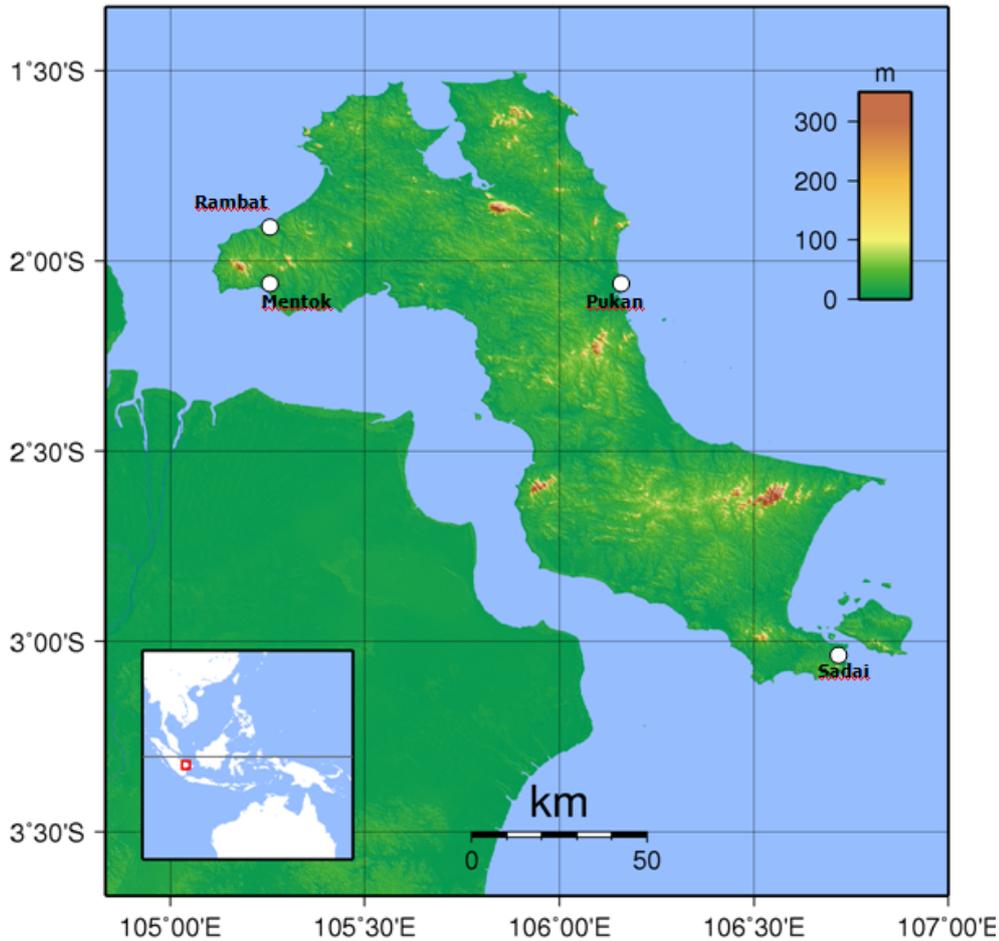
#### Shorebird surveys

The coast along Bangka Island was visited during 26 March to 3 April 2011 and 26 May to 2 June 2011. The birds were counted along the shore using binoculars and telescopes. Standard site description and waterbird count forms (Asian Waterbird Census form) designed and tested by Wetlands International were used for the surveys. Waterbird count forms provided a standard list of all waterbirds, against which numbers could be tallied (the standard list included other waterbirds; e.g. sandpipers, plovers, redshank, etc.)

### RESULTS

There were 42 of birds from seven species recorded during this survey (Table 1). Pacific Golden Plover *Pluvialis fulva* and Malaysian Plover *Charadrius peronii* were two most frequently observed shorebirds recorded during this survey, with a total of 10 birds of each species (equivalent to 23.80% of the total count). The second most abundant shorebird was Whimbrel *Numenius phaeopus* (19.04%), followed by Kentish Plover *Charadrius alexandrinus* (14.28%), Common Sandpiper *Tringa hypoleucos* (14.28%), Javan Plover *Charadrius javanicus* (2.40%) and Bar-tailed Godwit *Limosa lapponica* (2.40%). Common Sandpiper (*Actitis hypoleucos*) is the most widespread shorebird and was recorded from three of four sites although in low numbers. Pacific Golden Plover was the second most widespread, recorded at two sites. The other species were only recorded at one site.

Over all sites, the highest number of shorebirds was found in Sadai beach with a total of 17 birds, following Pukan beach with a total of 12 birds, Rambat beach with a total of 10 birds and Mentok beach with only three birds. The Pukan and Sadai beach have the greatest diversity of shorebird habitat, and each had four species present during counts. Rambat and Mentok beach only had one species present each.



**Figure 1.** Circled are sites surveyed during shorebird survey in the coast Bangka island, Sumatra, Indonesia.



**Figure 2.** Condition of Pukan beach at low tide on 31 March 2011. This is typical of most of the coast of Bangka island.

## DISCUSSION

Mees (1986) listed 18 species of shorebirds that occur on Bangka Island. Recent surveys recorded seven species of shorebird, three of which were new records for the Island. The three new species for Bangka Island are Javan Plover (Figure 3), Kentish Plover and Bar-tailed Godwit (Figure 4).

Pacific Golden-plover, Malaysian Plover, Whimbrel and Common Sandpiper are common shorebirds on Bangka Island and have been recorded previously.

There have been 14 species previously recorded on Bangka Island that were not observed during this survey. These were Grey Plover *Pluvialis squatarola* (two

**Table 1.** Shorebirds recorded between 26 March to 3 April 2011, and 26 May to 2 June 2011 on Bangka Island, Sumatra.

Species	Sites				Total	Percentage
	Rambat	Mentok	Pukan	Sadai		
Pacific Golden Plover			8	2	10	23.80
Kentish Plover				6	6	14.28
Malaysian Plover	10				10	23.80
Javan Plover			1		1	2.40
Bar-tailed Godwit			1		1	2.40
Whimbrel				8	8	19.04
Common Sandpiper		3	2	1	6	14.28
<b>TOTAL</b>	<b>10</b>	<b>3</b>	<b>12</b>	<b>17</b>	<b>42</b>	<b>100</b>

specimens collected in 1872), Greater Sand-plover *Charadrius leschenaultii* (two specimens collected, one in 1872 and one in 1873), Eurasian Curlew *Numenius arquata* (three specimens collected, one in 1872, one in 1873 and one undated), Wood Sandpiper *Tringa glareola* (one specimen collected in 1872), Common Redshank *Tringa totanus* (three specimens collected in 1872), Terek Sandpiper *Xenus cinereus* (two specimens collected, one in 1872 and one in 1873), Pintail Snipe *Gallinago stenura* (three specimens collected, one around 1860 and two in 1872), Red Knot *Calidris canutus* (one specimen collected in 1905), Red-necked Stint *Calidris ruficollis* (one specimen collected in 1872), Long-toed Stint *Calidris subminuta* (one specimen collected around 1860), Curlew Sandpiper *Calidris ferruginea* (three specimens collected in 1872), Ruddy Turnstone *Arenaria interpres* (three specimens collected, one around 1860 and two in 1872), Beach Stone-curlew *Esacus magnirostris* (one specimen collected around 1860) and Oriental Pratincole *Glareola maldivarum* (nine specimens collected, eight around 1860 and one in 1965) (Mees 1986). Additional (one-off) records have been obtained since then of Pacific Golden Plover, Greater Sand Plover, Common Sandpiper, Pin-tailed Snipe, Red Knot, Long-toed Stint, Ruddy Turnstone and Oriental Pratincole (Chasen 1935). The lack of these species records during the

present study is probably a result of not visiting Bangka Island during the main migration period for shorebirds.

The observation of Javan plover on 31 March 2011 at Pukan beach was unexpected. This is a first record for Bangka and second record for Sumatra (Kennerley *et al.* 2008, Iqbal *et al.* 2011). This is previously known as a Javan endemic (Piersma & Wiersma 1996, Mackinnon *et al.* 1998, Birdlife International 2011), but it is likely overlooked that records of the bird have spread widely to Wallacea (White & Bruce 1986, Coates & Bishop 2000, Tebb *et al.* 2008).

The occurrence of Kentish plover on Bangka Island was not unexpected, as this species has been recorded in various numbers at nearby Banyuasin Peninsular, which is an important shorebird site in Sumatra (Verheugt *et al.* 1990). In Sumatra, Crossland *et al.* (2006) stated that Kentish plover as an uncommon visitor in all coast and that Sumatra is outside the principal wintering range for this species.

The Whimbrel was recorded with a total of eight birds in Sadai on 31 March 2011. The Whimbrel has been recorded in Bangka Island, but without specific locations. The records of Whimbrel in Bangka Island are two male specimens collected on 2 July 1872 and 8 September 1872 (Mees 1986).

An adult female Malaysian plover was observed at Rambat beach on 29 May 2011 (Figure 5). This adult female



**Figure 3.** A Javan Plover *Charadrius javanicus* in Pukan beach, Sungai Liat, Bangka.



**Figure 4.** A first record of Bar-tailed Godwit *Limosa lapponica* for Bangka Island on Pukan beach on 31 March 2011.



**Figure 5.** An adult female Malaysian plover on Rambat beach on 29 May 2011.

plover occurred in the area when most of shorebirds were absent from the coast of Bangka Island. It suggests that the bird possibly breeds there. In Sumatra, the Malaysian Plover was reported to breed at Singkep, Riau Archipelago where eggs and birds were collected on 21 April 1950 (Marle & Voous 1988). Another breeding report is an observation of downy young juvenile along the beach between Belimbing and Danau Minjukut, south-west Lampung coast, 17-24 May 1992 (Holmes 1996). There have been no reports of breeding Malaysian plover from Sumatra since.

Information on populations and distribution of shorebirds in Bangka Island is still lacking and numbers of each species recorded on Bangka Island during this study were small (no more than 10 birds). Bangka Island has a long coastline and is geographically located close to two internationally important sites for migrating shorebirds in Sumatra, Banyuasin Peninsula in South Sumatra province and Cemara beach in Jambi province. Bangka Island has potential as an important buffer zone habitat linking to three main islands in western Indonesia (Sumatra, Java and Borneo). Further study during the wintering period (October-February) is needed to study the composition, numbers and distribution of shorebirds along the coast of Bangka Island.

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