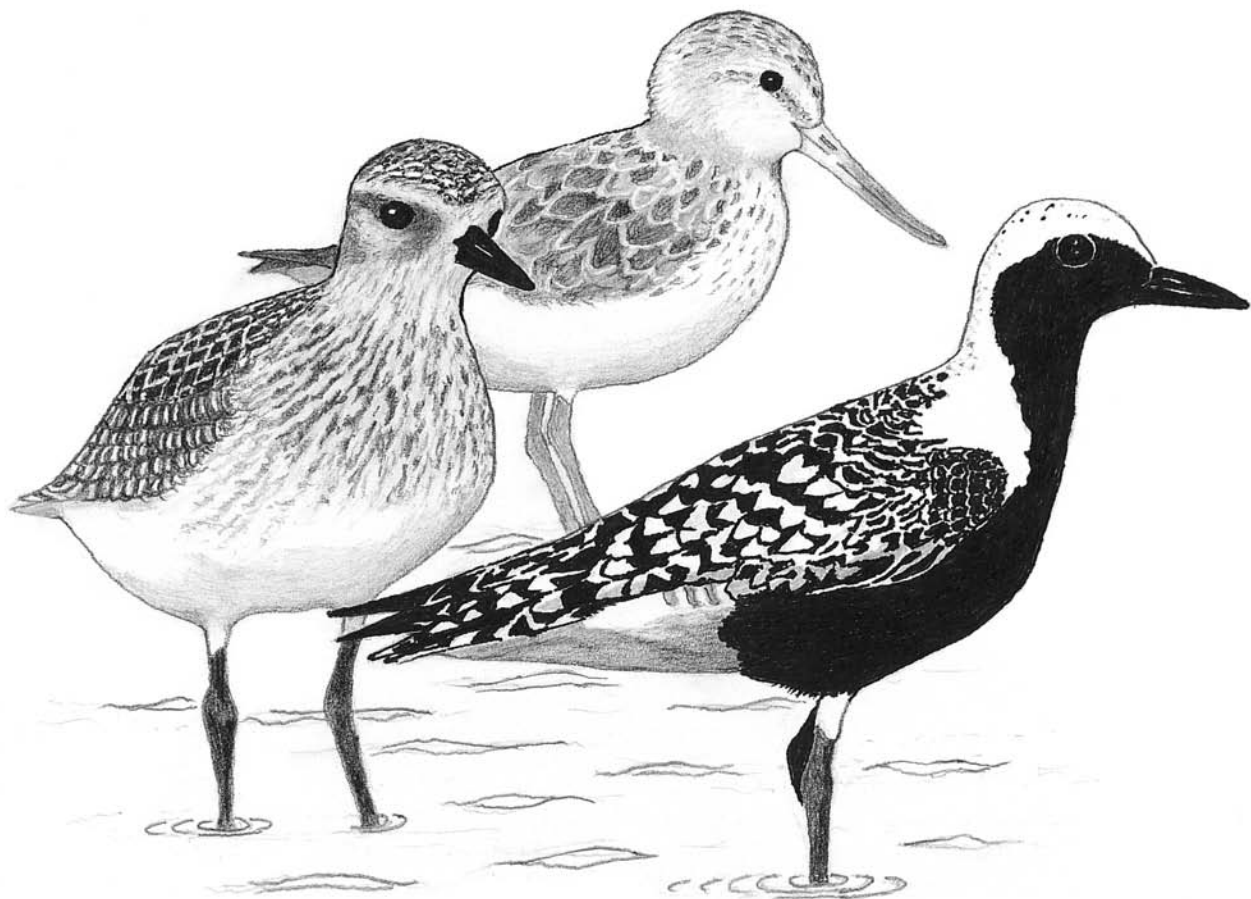


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BANDING AND FLAGGING SHOREBIRDS AND TERNS IN THAILAND: A PRELIMINARY ASSESSMENT OF WORK DURING 2005–2009

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With its long shoreline and extensive intertidal and freshwater wetland habitats, Thailand is of major conservation importance for shorebird populations of the East Asian-Australasian Flyway (Round 2006).

Although Thailand was the base from which the pioneering studies of the 1963–1971 Migratory Animal Pathological Survey (MAPS) were administered, relatively few shorebirds and terns (252 individuals of 21 species) figured among the 185,472 birds banded in the country during that period (McClure 1974; McClure and Leelavit 1972). More significant efforts were undertaken during 1980–1981 when 1744 shorebirds of 23 species were banded (Melville 1982); and in 1984 when a further 146 shorebirds of 18 species were banded under the Interwader Programme (Starks 1985). Further attention has been focused on shorebirds in recent years. During 2000–2005, 963 shorebirds and terns of 30 species were banded, predominantly Long-toed Stints (229 birds) and (resident) Malaysian Plovers (272, including 112 pulli). predominantly Long-toed Stints (229 birds) and (resident) Malaysian Plovers (272, including 112 pulli).

From September 2005 onwards, all shorebirds and most terns banded in Thailand were also leg-flagged (black above green, in accordance with the Environment Australia and Wetlands International Colour Flagging Protocol). Initially only mist-nets were used, but following the experience gained by four Thai nationals during the 2006 NWA Wader and Tern Expedition, a cannon-net was constructed for use, and the first successful shorebird cannon-net catches in Thailand were made in September 2007.

This has resulted in a great increase in the numbers captured and flagged—a total of 4523 shorebirds and terns of 39 species during 2005–2009 (Table 1).

Most birds were cannon-netted at high-tide roosts on dry or semi-flooded, out of use, salt-pans, in the Inner Gulf, west of Bangkok (c. N13 15 E100 13) and on sand beaches at Ko Libong, an island c. 4 km off the west coast of the peninsula (N 07 15 E 99 28). Catches have also been implemented at two other peninsular west coast sites: Krabi, (N 08 01 E98 56) and Thungwa, Satun Province (N07 02 E 99.40). Three of the four sites (Ko Libong, Krabi and the Inner Gulf) are recognized as Wetlands of International Importance and Important Bird Areas (BirdLife International 2004). Krabi is additionally recognized as a Shorebird Reserve Network Site.

Mist-netting was chiefly implemented in the Inner Gulf, at a pilot waste-water treatment facility (“sewage farm”), the Laem Phak Bia Environmental Research and Development Project, Phetchaburi Province (N13 03, E100 05), where

shorebirds were caught during daylight hours among small, widely spaced mangrove trees in water treatment lagoons. Elsewhere in the gulf nocturnal mist-netting was carried out on open salt-pans and traditional prawn ponds.

Whereas most mist-netting targeted smaller shorebirds, in the first few months after cannon-netting began to be implemented the first catches of larger shorebirds (mainly Bar-tailed Godwits and Whimbrels) were obtained.

Although the numbers and diversity of shorebirds in the Inner Gulf are exceptional, cannon-netting there is more labour-intensive and problematical than at Ko Libong, chiefly due to the great expanse of suitable roosting habitat—roughly 400 sq. km of coastal flats, aquaculture ponds and salt pans. The birds have a lot of sites from which to choose. Additionally mist-netting is problematical because of the gulf’s idiosyncratic tidal patterns when, for much of the year, the tide recedes or remains low during the hours of darkness: there are very few days when the ideal mist-netting conditions of a nocturnal incoming tide pushing birds into nettable roosts prevail. Although sample sizes from mist-netting are small, the range of species caught was slightly larger (so far 27 species, compared with 24 species in cannon-nets). Roughly one third to half of all species caught in mist-nets have not yet been caught in cannon-nets, and *vice versa*, illustrating the complementary nature of the two catching methods. In particular, mist-netting has been important in sampling species such as Marsh Sandpipers, (which mainly roost and feed on water-filled ponds), Common Redshanks (which chiefly roost among mangrove stumps or visit water-filled ponds); Little Ringed Plovers, Wood Sandpipers and Long-toed Stints (found chiefly on otherwise under-sampled fresh-water habitats) and Common Sandpipers (which are not usually gregarious).

Among those species for which Thailand holds internationally important wintering or staging populations, yet which remain unsampled, are Asian Dowitcher and Nordmann’s Greenshank. Additionally the counts of Red Knots, Great Knots and Black-tailed Godwits that winter in the Inner Gulf have all increased markedly in recent years (Round 2006), and these populations deserve study.

Since flagging started, there have been at least 50 trans-national resightings or recaptures of Thai-flagged birds (a resighting rate of 1.1%). Most of these (33 resightings) were from the E and NE Chinese coast. It is noticeable that neither of the two predominant species flagged in Thailand, Lesser Sand Plover (1751 birds) and Greater Sand Plover (600 birds), have yielded any trans-national resightings, presumably because both of these (races *C. m. schaeferi* and

C. l. leschenaultii respectively) migrate from Thailand due north into Central Asia, where the land area is vast and observer coverage very limited. Among the most spectacular resightings or controls were two Bar-tailed Godwits resighted in Korea and Liaoning, NE China, only two weeks after they were flagged in S Thailand; and a Sanderling (one of only four then banded) that was controlled by a Chinese bander in the Gulf of Bohai, NE China, in the spring immediately following banding.

Additionally as part of this work, satellite tags have been affixed to two Brown-headed Gulls (*Chroicocephalus brunnicephalus*), one of which has been successfully tracked from the Inner Gulf to both Cambodia, and to presumed breeding grounds in Qinghai, China. Satellite tags were also recently affixed to two Eurasian Curlews.

Thanks partly to the activities of the many Thai bird photographers and birdwatchers, there have also been 42 resightings in Thailand of 12 species flagged elsewhere on the flyway. This has included two critically endangered Spoon-billed Sandpipers, colour-banded as chicks, one each from N Chukotka and S Chukotka, resighted in winter 2005–2006 (Round and Gardner 2008); Broad-billed Sandpipers, Red-necked Stints and Great Knots flagged on the E Chinese coast, and Curlew Sandpipers from both South and NW Australia. Additionally a Common Redshank was controlled in the Inner Gulf 17 years after having been banded in Malaysia.

Analysis of age ratios, geographical variation, weights, biometrics and moult patterns of the increasing sample of shorebirds being caught is planned. Tentative findings from breeding plumage Common Redshanks caught indicate that most have been of the N Asian race *T. t. ussuriensis* (W.G. Hale, *in litt.*).

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