

NOTEBOOK

Breeding plumage Curlew Sandpiper *Calidris ferruginea* in Taiwan during the northern winter

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On 21 December 2005 in salt pools just north of Tainan, southern Taiwan, we came across a Curlew Sandpiper *Calidris ferruginea* in bright breeding plumage amongst a large group of about 40 winter-plumaged Curlew Sandpipers, about 50 Dunlin *Calidris alpina*, about 20 Red-necked Stints *Calidris ruficollis* and a few Pacific Golden Plovers *Pluvialis fulva*. Amongst all the winter-plumaged shorebirds, this individual Curlew Sandpiper stood out due to its very bright, deep red plumage, appearing, as far as we could tell, to be in fresh breeding colours. The face, upperparts, chest and lower belly were bright red, with a limited whitish smudge beneath the chin and a white eye-ring, but otherwise the head and face were uniformly red. The undertail-coverts were immaculate white, although the red on the lower belly appeared to bleed into the vent. The underparts appeared to be uniformly red with little or no wear on the feathers. No white edges to the feathers on the chest and lower belly were observed. The scapular and mantle feathers had broad red edges, contrasting with their black centres. The lower scapular feathers were nearly all tipped with broad red edges with the exception of the lowermost feathers, which had hints of white tips. The greater coverts were dark grey with whitish edges, and the primaries were dark. As far as we could tell, there was no evidence of any feather wear or moult limits (i.e. boundaries between new and old remiges and rectrices arising from a partial or incomplete moult).

Plate 1. Breeding- and winter-plumaged Curlew Sandpipers *Calidris ferruginea* near Tainan, Taiwan, December 2005.



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In over 20 years of extensive shorebird experience, C-TL has never seen any northern hemisphere migratory shorebird in breeding plumage during the northern winter. We were also unable to find any published record of a similar observation for Curlew Sandpiper or any other migratory shorebird species. We polled a number of shorebird enthusiasts for similar observations but only one person noted that he had once seen a Grey Plover *Pluvialis squatarola* in breeding plumage during the winter in North America (R. Crossley pers. comm.). Shorebirds in breeding plumage during the winter must clearly be aberrant individuals and hence very rare.

Birds with rufous plumage can occasionally suffer from erythrism, an amplification of the reddish pigmentation beyond the bird's normal coloration owing to a genetic mutation or diet. In this context, we note that this particular Curlew Sandpiper appeared to be slightly redder than typical breeding-plumage birds. Despite the unworn plumage of this individual, it lacked any hint of white edges on the red underpart feathers, and the lower mantle and scapular feathers were predominantly tipped with red rather than the typical white of the normal breeding plumage. However, erythrism alone cannot be the sole explanation. Except for the slight excess in red pigmentation, the feather colour patterns were fundamentally those of the breeding plumage. This individual's moult cycle appears to be six months out of phase. In Curlew Sandpipers, moult into full breeding plumage occurs during April and May, just before arrival on their Arctic breeding grounds. We speculate that this bird's out-of-phase moult schedule could be the result of hormonal imbalance. This may also have resulted in the slightly redder than normal appearance of this individual.

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