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The World's first known juvenile Cox's Sandpiper

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For once, the North Americans have beaten the British by being first to find a spectacular vagrant Asiatic shorebird away from the Alaskan out-islands.[1] This time we outdid everyone, producing a juvenile Cox's Sandpiper *Calidris paramelanotos* in Massachusetts. This individual, depicted in colour in plate 145, is not only the first of this recently described species from the Western Hemisphere, but also only the second away from its Australian wintering grounds (an adult was reported from Hong Kong in spring 1987: *Brit. Birds* 80: 391). The firsts continue, however, for, until this individual, Cox's juvenile plumage was undescribed, and, until this photograph, there have been, to my knowledge, no published colour photographs of Cox's Sandpiper in any plumage, let alone that of a juvenile. I am exceedingly grateful to the bird's discoverer, Mark Kasprzyk, for much background information, and to Simon Perkins, for permission to reproduce here his splendid colour photograph.

This bird was first mist-netted at night, on 15th September 1987, at Duxbury Beach, a long barrier spit separating Plymouth Bay (where the *Mayflower* Pilgrims landed in 1620) from Cape Cod Bay/Atlantic Ocean waters. It was ringed as a Pectoral Sandpiper *C. melanotos* (understandable, at 03.00 hours), but photographed in the hand nonetheless, carefully measured, and then released. Nagging identification doubts soon set in, and efforts to relocate the bird were successful by daylight on 15th. Several observers examined it at close range over the next few days, and it went on the Massachusetts rare bird telephone-tape, finally, as an adult

[1] This is actually not the first, truth to tell. An adult Spoon-billed Sandpiper *Eurynorhynchus pygmeus* was in Vancouver, British Columbia, in 1978, and a juvenile Far Eastern Curlew *Numenius madagascariensis* was in the same general area in 1986. Both individuals were illustrated with black-and-white or colour photos in *American Birds* (32: 1062-1064; 40: 13-15).

145. World's first known juvenile Cox's Sandpiper *Calidris paramelanotos*, Massachusetts, USA, September 1987 (*Simon Perkins*)

Sharp-tailed Sandpiper *C. acuminata* on Friday 18th. Nonetheless, R. A. Forster, a veteran Massachusetts birder who had studied it carefully that day, was, by that evening, already suspecting that it might be a juvenile Cox's, and, over the weekend of 19th/20th, it was scrutinised with this possibility in mind. Finally, late on Monday 21st, default consensus was reached that, indeed, it *had to be* a juvenile Cox's—no mean feat, given the species' rarity and that its juvenile plumage had never been described.

The word went out that night, and by Tuesday 22nd quite a crowd had assembled, but the large numbers of sandpipers that the Cox's had been consorting with were nowhere in evidence. Most observers left, disappointed, by early afternoon—too soon, it turned out, for one persistent stalker saw the bird well later that day. That was its last observation.

A detailed analysis of this bird's plumage, to be compared with that of another juvenile reported from Australia also last autumn, is in preparation by the discoverers. Likewise, a complete history of this fascinating taxon is also in preparation, and one or both papers will be illustrated with photographs of this and possibly other individuals.

The purpose of this account (besides simple gloating) is to alert British and European observers to Cox's Sandpiper's potential occurrence, and to indicate what field marks one ought to be looking for. Clearly, the bird *is* in the Pectoral/Sharp-tailed assemblage. Clearly, too, it shares features of

both, yet is distinctive in it own right. It is not hard to see from plate 145 why its first Australian observers thought 'odd Dunlin' *C. alpina*. On closer inspection, though, one is given the impression of two separate species: the bill and perhaps head of a Dunlin[2] (or even a hint of Broad-billed Sandpiper *Limicola falcinellus* from bill 'kink' and slight double supercilium), coupled to the body of, say, a juvenile Pectoral. It would seem that, apart from size—it appeared bulkier than Pectoral—its most striking on-ground feature is the all-dark, long (35 mm or more) decurved bill, while in flight the extensive white sides to the uppertail-coverts are reminiscent of Ruff *Philomachus pugnax*.

Wing-covert differences, useful in separating Little Stint *C. minuta* from Red-necked Stint *C. ruficollis*, might also prove helpful here: on Cox's they appear to be dark-centred light-brown, edged white, whereas those of fresh Pectorals are usually grey-brown or rich dark-brown, fringed buffish or off-white, and of Sharp-tailed a quite similar two-toned brown, edged whitish. In this regard, Cox's is more like Sharp-tailed, although its back coloration, and especially dull white nape, are more like Pectoral. The tertials show buffy inner and white outer margins, resembling those of Sharp-tailed, but in their colour, intensity and spread (subdued, not strikingly orange, brown and white) are more like Pectoral. Cox's buffy breast, strongly brown-streaked but irregularly bordered below (not evident in plate 145) without obvious continuation down the sides, is more like Pectoral, but this character combination might prove distinctive. Some literature references to a streaked crissum (vent and undertail-coverts), *à la* Sharp-tailed, are not supported by this photograph, and I am not aware of its being mentioned by any who saw it. In this respect, it is also similar to Pectoral. Most observers believed it appeared bulkier and longer-legged than Pectoral or Sharp-tailed, and if there was one feature instantly setting it apart from both of those species it was the quite long, decurved, all-dark bill. Legs were more Sharp-tailed 'dirty-greenish' coloured, and the cap was closer in shade and extent to Pectoral, although lacking the rich rufous tones both other species typically show as juveniles. The indistinct main supercilium was fainter, fore and aft, than on the other species, and the buffy-orange ear-coverts, somewhat like a Western Sandpiper *C. mauri* in breeding dress, might conceivably be typical of all Cox's plumages, to judge from plate 82 in Hayman *et al.*'s (1986) nonpareil book. No-one seems to have noticed, or commented upon, the underwing pattern, which can be used to separate Pectoral and Sharp-tailed.

A few additional features of this and one of the Australian Cox's (black-and-white photographs in Cox 1987) deserve mention, even if only tentatively at this stage: (1) Cox's tarsus is absolutely longer than that of Pectoral, and in photographs the knee is very close to the belly feathering, accentuating the long-tarsused look; (2) Cox's forehead is steep, giving a round-headed look in contrast to the flat-headed jizz of Pectoral and,

[2] Comparison here is with the two North American races of Dunlin, which generally have longer and more uniformly decurved bills than do the Dunlins most frequently observed in Western Europe.

especially, Sharp-tailed; (3) Cox's bill seems finer than Pectoral (nearest to Cox's in bill length), possibly because it (usually) lacks the pale bill base of Pectoral, or because it is finer, or because its bill proportions are different; (4) the white Vs on the scapulars of this juvenile Cox's are weaker than those on most Pectorals, but how consistent a character this is remains to be seen; (5) Cox's lower scapulars (below the lower white V) seem to have lighter proximal bases contrasting with darker distal halves, giving a mottled or dappled effect, usually not apparent on Pectorals, although I have a photograph of a fresh juvenile Pectoral approaching it; (6) Cox's at-rest jizz is that of an extremely pointed-winged bird, very much like Baird's Sandpiper *C. bairdii* or White-rumped Sandpiper *C. fuscicollis*, and less like Pectoral or Sharp-tailed in that respect; this effect is especially striking in the photographs in Cox's (1987) paper.

There are two further identification complications with plate 82 in Hayman *et al.* (1986), which is both the World's standard for shorebird identification as well as the only readily accessible source of colour plates of Cox's Sandpiper. As Cox (1987) pointed out, bird 201b is labelled Cox's Sandpiper when in fact it seems to be a Pectoral, and I call readers' attention to the vignette of three heads in the lower left of the same plate: the Sharp-tailed is a juvenile, the Pectoral would seem to be a worn winter adult, as may also be the Cox's. Alas, none of the three birds is aged in the accompanying caption. More substantive information on the identification of Cox's Sandpiper must await new data, corrected colour plates, and new colour photographs of a selection of individuals in various plumages.

Now, just what is Cox's Sandpiper? One thing it seems not to be is Cooper's Sandpiper, *C. cooperi*, known from the unique type taken on Long Island, New York, in May 1833 (Ridgway 1919; American Ornithologists' Union 1983), and at first blush possibly *paramelanotos*. I am told, however, that the holotype and paratype of *paramelanotos* were compared directly with *cooperi* at the Smithsonian Institution, with identity being ruled out (R. B. Clapp, verbally).

It has been suggested here and there that *paramelanotos* represents not a relict species, but a 'stereotyped hybrid' (*sic*), between perhaps Sharp-tailed Sandpiper and Curlew Sandpiper *C. ferruginea*, although there is no consensus on the likely parentage if in fact it is a hybrid. Comparison of juveniles of the several candidate *Calidris* species (e.g. from plates in Hayman *et al.* 1986) indicates that Cox's is quite similar to Pectoral, less so to Sharp-tailed, and utterly unlike Curlew Sandpiper. In fact, Cox's is much more similar in both juvenile *and* adult plumages to White-rumped Sandpiper than to Curlew Sandpiper, a resemblance that seems so far to have escaped comment. Obviously, White-rumped also has a white 'rump', one of the features that suggested Curlew Sandpiper as a possible 'hybrid parent' in the first place. And if the two Cox's type specimens are correctly sexed, the male is noticeably larger than the female in all dimensions, as Pectoral but exactly opposite to Curlew Sandpiper; male and female White-rumped Sandpipers are essentially the same size.

There is an even better reason for rejecting the 'stereotyped hybrid' notion: most, if not all, valid bird species differ in so many genes or alleles

(Buckley 1982; Corbin 1987) that hybrid combinations are extraordinarily variable. The effects of independent assortment and random recombination manifest themselves anew in each hybrid individual, the very antithesis of stereotypy. Thus, hybrid origin seems a most implausible explanation for the relatively consistent external morphology exhibited by the Cox's Sandpipers reported to date. One could even argue that, in several features, Cox's is more distinctive than many stints and peeps, dowitchers *Limnodromus*, and so on. Although taxonomically nameable geographic variation has not been widespread in the evolution of small waders, one cannot dismiss the possibility that Cox's Sandpiper is merely a recently recognised race of an already known species; but which one? Critical resolution of this question must await biochemical analyses of its allozymic, cryptic genetic variation, and eventually sequencing of its DNA, relative to any putative parental or conspecific species. My prediction is that Cox's Sandpiper will prove to be a valid, overlooked, Siberian-breeding *Calidris*, one of those relicts in the same group as Asiatic Dowitcher *L. semipalmatus*, Little Curlew *Numenius minutus*, Slender-billed Curlew *N. tenuirostris*, Spoon-billed Sandpiper and Nordmann's Greenshank *Tringa guttifer*. What we do know now is that, having occurred at least once in eastern North America in autumn, it is fair game anywhere in Europe.

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