Testing Field Marks of Adult Dowitchers in Ohio: The Testimony of Specimens

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Times may have changed, but once, next to the outdoors, the research collection was the favorite haunt of ornithologists. Treasure-houses of genetic material, intraspecific variation, systematic relationships, type and voucher specimens, and lasting evidence of evolution in action, trays of museum specimens now go unopened for months at a time. For field birders, however, they offer a trove of identification hints—tangible evidence from the birds themselves, rather than illustrations and descriptions merely derived from them. There are some pitfalls in relying on skins, but much can still be learned from them that can be gleaned in no other way.

The following notes summarize studies at Ohio State University's Museum of Biological Diversity of its 67 skins of short-billed dowitchers *Limnodromus griseus hendersoni* (hereafter SBD), our local subspecies, and 31 of long-billed dowitchers *Limnodromus scolopaceus* (hereafter LBD), nearly all collected in Ohio (Figure 1). The intent was to evaluate the "textbook" field-marks of these easily confused species: just how reliable are the published ID hints at separating known-identity birds in the hand, and what are the implications for Ohio birders in the field?

Figure 1. A tray of long-billed dowitcher specimens, along with a few red knots, at the Ohio State University Museum of Biological Diversity in Columbus, Ohio.

These species can be extremely difficult to tell apart. The photograph on the cover page of the American Ornithologists' Union's prestigious *Birds of North America* account for short-billed dowitcher (Jehl et al. 2001), for example, is actually of a LBD, so even Homer nods on this call. Juveniles are fairly easily identified (Figure 2), but dowitchers in other plumages present a lot of problems. There are some confusing statements in the literature (for a summary, see Winger 2003), including accounts of adults identified in the hand. Several popular field guides, including Peterson's venerable work (1980), don't even treat the distinct subspecies of short-bills. All the field guides illustrate adult dowitchers in the immaculate fresh finery of spring, but in Ohio, where LBDs are very scarce in spring, we look in vain for this plumage on our worn birds of fall.

Figure 2. Juveniles, short-billed dowitcher (30 August) on left, and long-billed dowitcher (14 September) on right, showing typical plumage distinctions.

In any review of the popular field guides and major ID articles, the following criteria emerge for identification of adult *hendersoni* short-billed dowitcher vs. adult long-billed dowitcher in alternate plumage.

- *Morphology*: Length of bill, legs, wings.
- *Tail Feathers*: Pattern of white and black on tail.
- *Underparts Coloration*: Shade and overall extent of background color beneath.
- *Underparts Markings*: Especially on the throat or sides of upper breast.
- *Upperparts Coloration and Markings*: Overall darkness of upperparts (i.e., color/width of fringing and internal markings on dark feathers).
- *Voice*
- *Jizz*

In taking notes on these features for field birders, the author did not undertake microscopic scrutinies or take anything but rough and ready measurements, concentrating instead on grosser features one might reasonably compare through optics at a distance. Similarly, the photos presented here are no beauties, but nevertheless present views better than we often get in the field. All short-billed dowitcher specimens discussed are *L. g. hendersoni* (SBD).

Morphology

The three largest LBD bills (all in females) measured ~7.4 cm. The three largest SBD bills (also females) measured ~5.9, ~6.0, and ~6.2 cm. Thus, for a few LBDs bill length alone (estimated widely in the literature as ≥twice the head length) should help to separate them (Figure 3). Nine times out of 10, however, bill length is not diagnostic in the field. As for leg length, tarsi of both females average longer, with LBDs' averaging longer than SBDs' (Chandler 1998, Jehl et al. 2001, Takekawa and Warnock 2000), but there is so much overlap that this feature must be useless for field ID, even in direct comparison. Tarsi were not measured for this study. SBDs are said to average more petite overall, but the masses of shorebirds vary considerably during migration with state of nutrition etc., and could not be accurately estimated on stuffed skins in any event.

Comparison between lengths of folded wings and tail has recently been anointed as a useful criterion. Apparently it applies best to birds in unworn plumage (i.e., in fresh, fully-grown alternate or basic feathers) seen very well. Chandler makes much of the length of dowitcher wings as an ID criterion, but gives measurements of LBD and SBD wings that are by far the closest pairing in this regard (vs. *L. g. griseus* and *L. g. caurinus*), with a range of difference of 2-6 mm in males and 1-6 mm in females (Figure 4), a tough call in the field under the best of circumstances. A check of this feature in 26 LBD specimens (alternate, juvenal, and basic plumages) showed only one with primaries extending beyond the ends of the tail feathers: a strange 9 May 1869 specimen from Alaska, its left wing extends fully 22 mm beyond the tail, and the right falls 2 mm short. Because this old specimen was

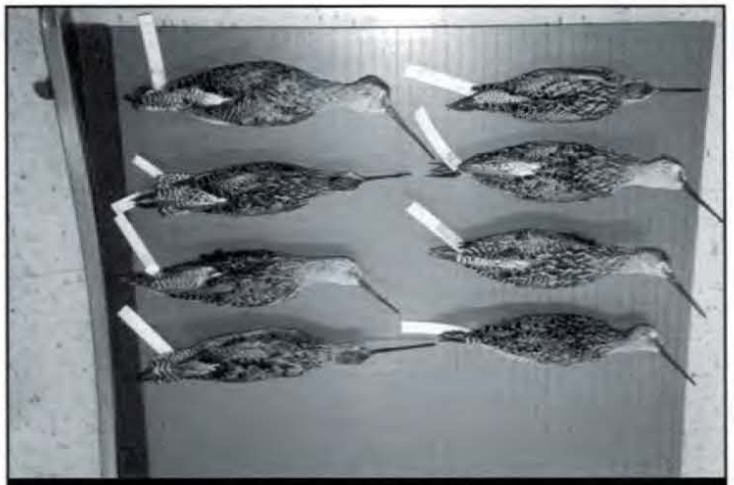

Figure 3. Worn adults, all collected in July and August in Ohio, of long-billed dowitcher (four birds on left) and short-billed dowitcher (birds on right). Compare tail banding, molt, and darkness of upperparts. The upper left bird has a 7.4 cm bill.

brittle, no attempt was made to determine if outer primaries might have been missing, or if improper preparation resulted in unnatural positioning of one wing. Among 65 SBD skins (24 adults and 41 juveniles) examined, only 12 showed at least one wingtip extending farther than tail feathers: 10 are adults, six of them in spring alternate plumage, four in fall's. Fall LBD adults showed worn flight feathers (or emerging fresh ones), with wing tips as much as 29 mm short of the tail; fall SBD adults may have been equally worn, but their corresponding maximum shortfall was 14 mm. These results do not support this as a useful ID criterion, at least locally. Perhaps it is more useful with other short-billed dowitcher subspecies, or basic-plumaged SBDs, but there are no known Ohio specimens of either.

Tail Feathers

Many guides tell us the tail feathers of LBDs show black bands wider than white ones, while the contrary is true for SBDs. Scrutiny of specimens for this study showed this seems to hold true on average, but far from the case for each and every bird (Figure 5). As for visibility in the field, we estimated that 14 of 31 LBD skins showed black bands enough wider than white ones to enable an observer in the field to use this feature, if well seen, as a useful ID criterion. Some guides caution birders not to confuse the tail coverts with the ~5 cm-long tail in this aspect; this is good advice, because the coverts examined were much more alike. Easy to assess on birds in the hand, details on tail feathers are not so clear from a distance (even with 10X optics at 100 yards, tested on skins), and even more difficult to glimpse in the field because they are seldom exposed to view except in flight.

Figure 4. Left, long-billed dowitcher in fresh spring plumage 18 May; right, short-billed dowitcher in worn alternate plumage 6 July. Note the short-billed dowitcher's wings extend past the tail, unlike those of the long-billed dowitcher. Tail bands are equivocal, bills of these females are of equal length.

Underparts Coloration

LBDs did show a darker orange-red hue beneath than a few SBDs (the latter all spring birds in our sample), which showed a lighter or even pinkish-orange not exhibited by any LBDs; however, the majority of Ohio dowitcher specimens appeared indistinguishable in this aspect in the hand. As for the amount of white below, SBDs always showed some, but often significantly less than is illustrated in some field guides, and the fact that worn and molting (beginning on the flanks) underparts feathers among LBDs present at the same time as SBDs can make them look more like the latter makes this criterion of little practical use for identification. All fall dowitcher skins showed at least a little white on the underparts, the unmolted LBDs least; SBD white tended to be denser toward the vent, and LBD white more generally distributed. Based on this study, underparts coloration seems not to be a reliable criterion.

Underparts Markings

Good looks at dowitchers in fresh alternate plumage will show, we are told, LBD with distinct barring across, or at least on the sides of, the upper breast, and SBDs with separated spotting in these areas (Figure 6). Both usually showed strong barring on the flanks, even in fall. LBDs are seldom seen in spring in Ohio, when some are in molt anyway, and southbound adults of both species arrive in worn plumage that doesn't often show this characteristic clearly. One LBD skin showed distinct barring as late as 13 August, whereas another was largely in basic plumage by this date. To make matters worse, some southbound adult SBDs in summer

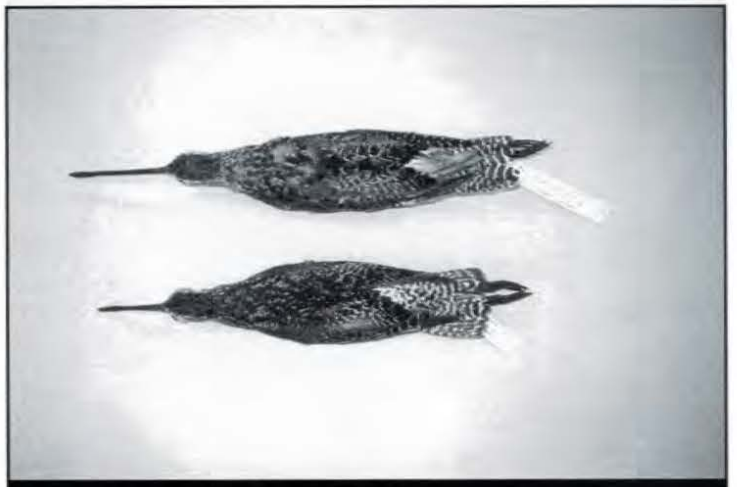

Figure 5. The 13 August long-billed dowitcher above shows "textbook" tail bands, but the 2 August short-billed dowitcher is not so typical. Note the molt underway on the long-billed dowitcher.

showed patterns that looked confusingly like barring on the sides of the breast, even from a couple of feet away. While a dowitcher with clear barring in this area is almost certainly a LBD, in Ohio this doesn't seem to be a useful ID criterion in most instances, especially later in the fall migration as wear and molt ensue.

Upperparts Color and Markings

LBDs in high breeding plumage have rusty internal bars and comparatively narrow frosty-white fringes to the upperparts feathers. SBDs of the same age tend to show golden edges and internal markings to mantle and coverts feathers. At least this is what the field guides say. It is easy, however, to choose numerous specimens of spring migrant SBDs and LBDs that seem identical—at arm's length—in overall hue and markings on the upperparts. And of course by the time southbound dowitchers reach our latitude, wear has obliterated the subtle distinctions said to be visible among freshly-plumaged adults. It was surprising to see how seldom field-guide distinctions about the upperparts were 1) visible, or 2) even when visible, diagnostic among these specimens. Is it possible that live birds are more distinguishable than dusty old skins? Perhaps, but the author is now a lot less likely than he once was to suggest a distant dowitcher might be a LBD based merely on the overall darkness of its upperparts.

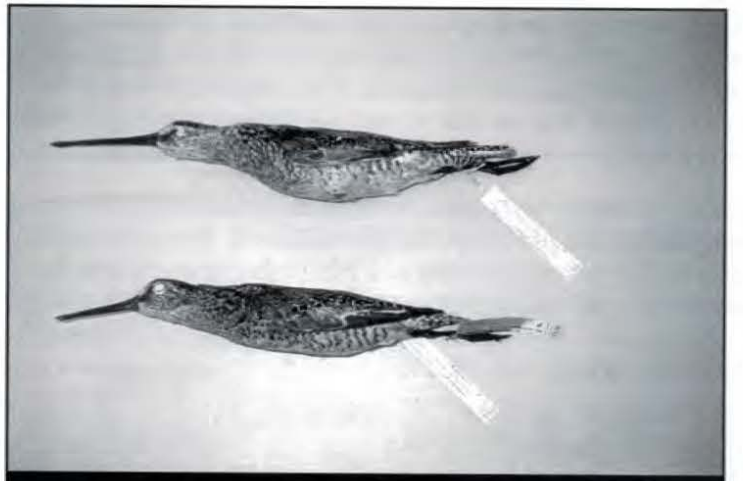

Figure 6. Same birds as in Figure 5. Long-billed dowitcher of 13 August above, and short-billed dowitcher of 2 August below. Both show flanks barred. On the upper breast the long-billed dowitcher shows barring, the short-billed dowitcher spotting.

Voice

Vocalization differences are said to be the gold standard of ID for dowitchers of any age. Consulting field guides will give the impression the species are quite easily distinguished in this way, but various vocalizations can sound more alike than the guides allow. Authors use identical words so often one wonders if they are simply listening to one another rather than to the birds. SBD's call, often described as a "mellow, yellowlegs-like 'tu-tu-tu,'" doesn't sound mellow (more like "chew," than "tu"), can be single and is doubled as often as tripled, is more hurried and muted than a yellowlegs', and can resemble LBD as closely as it does a yellowlegs. Furthermore, if one's field practice with these birds' calls is restricted to migrants in Ohio, real confidence takes time. The birds don't vocalize all that often—SBDs seldom except when disturbed—and in settings crowded with other shorebirds their voices seldom stand out in the throng. Finally (see Wilds 1990), their calls differ depending upon circumstances, and both species occasionally utter nuptial songs on migration. Overall, vocalizations heard well can be diagnostic for the experienced and careful observer, but relying on field-guide descriptions alone is not advised.

Jizz

Some observers very familiar with dowitchers use jizz as an indicator in distinguishing them. LBDs, they say (in another oft-repeated cliché), convey a lanky godwit-like impression, while SBDs more resemble snipes. LBD's bill can show a subtle double curve (Figure 3), or a slight droop toward the tip, seldom shown by SBD; the impression given by specimens, however, was that the longer the bill—no matter which species was involved—the more often such features can be discerned. When combined with the extra reaching required by longer legs, the shorter wings of LBD may lend it a chunkier, hunch-backed, front-loaded look. Interestingly, most of these sorts of hints tend to come from birders on the coasts, who get more practice than we with wintering birds (and, one should add, with short-billed dowitcher subspecies less like LBD than the trickier *hendersoni*).

All in all, comparing known-identity Ohio skins[1] with field guides' treatments of adult dowitchers does not inspire much confidence in the "textbook" field-marks. Armed only with Peterson (1980), for example, observers would probably be helpless to identify most dowitchers in Ohio. Sibley (2000) is much more helpful, but only briefly mentions, and does not illustrate, the important effects of wear in adults. The National Geographic Society guide (2002) best illustrates some degree of wear in plumage. Lengthier treatments, such as Wilds (1983, 1990) mention the exceptions to the rules, the overlapping characters, and the closeness of the calls, uncertainties that looking at a good series of skins will quickly reveal. All in all, we here in the "fly-over states" may be forgiven for detecting occasional bias in favor

[1] Are all OSU's dowitcher specimens correctly identified? All seem to have been vetted by Milton B. Trautman, and he in fact collected and prepared the majority of them, attesting to his special interest in this group. We found no deviations among the skins in more objective clues, morphometric values (e.g., bill length), or in molt or migration timing.

of *caurinus* and nominate *griseus* subspecies of short-billed dowitcher among the ID gurus, with less attention given to the admittedly rarer[2] and much more problematic *hendersoni* form of the Midwest.

This study suggests that many morphological and plumage differences between long-billed dowitcher and *hendersoni* short-billed dowitcher are overemphasized in the literature, especially as criteria for field identification. Certain hints for distinguishing them are useful at times, but there is much overlap, and this remains one of the most treacherous field IDs when conducted by plumage alone. When scrutiny of birds in the hand is so often inconclusive using these criteria, it is folly to attempt to go further when out in the field.

Additional Help in Dowitcher Identification

Fortunately, there are two additional criteria Ohio observers can apply to these birds. While it is not possible to use them in every instance, they are powerful aids, combined with other observed details, in identifying dowitchers in our part of their range. Very few field guides mention them: they are timing and state of molt.

Migration Timing

Our two dowitchers have very different schedules, and the dates of observations can often be a useful clue. Generously considered, the Ohio schedules are:

Adults headed north in spring
LBD: 15 March – 5 May (only a handful each year)
SBD: 20 April – 10 June
Adults headed south in fall
LBD: 25 July – 15 October
SBD: 25 June - 15 August
Juveniles headed south in fall
LBD: 5 September – 25 November
SBD: 5 August – 5 October

Thus, while one or both species of dowitcher may be present here during fully 10 months of the year (there are a few December records of LBD), the period when the confusable adults should both be present comprises only about 35 days; if we set aside overlap in the spring, when LBDs are far more unlikely, the prime period for confusion lasts about three weeks: 25 July – 15 August.

Molt

Finally, it is only slowly becoming generally known that during the southbound migration adult LBDs in Ohio—at least many of them—are molting, and SBDs are not. This phenomenon, mentioned only in the National Geographic Society volume and later by Sibley among major field guides, was treated in these pages by Dunn

[2] The Manomet Center for Conservation Sciences offers the following dowitcher population estimates (admittedly to some degree guesswork): *L. g. caurinus* 150,000; *L. g. griseus* 110,000; *L. g. hendersoni* 60,000; *L. scolopaceus* 500,000 (see *The Ohio Cardinal* 25(1):50).

(1999), and in our previous issue (Winger 2003). Any Ohio dowitcher seen to be in molt—with fresh gray winter feathers emerging (generally starting on the head and nape) is a LBD. Any Ohio dowitcher in basic plumage should be a LBD. LBDs often begin molt soon after arriving here, and during the period of confusing ID many show signs of molt, even including visible gaps in wings in flight. Individual LBDs may spend weeks in Ohio undergoing molt, but SBDs—retaining their summer plumage—pass through comparatively quickly. Some Ohio SBDs, likely first-summer birds, may appear to be in molt, with gray on the wing coverts that superficially resembles fresh basic feathers, but which proves on closer examination to be retained juvenal plumage, often so severely worn as to be tattered and even concave in cross-section among specimens. Adult SBD specimens from Ohio do not show basic gray feathers emerging on the head, nape, mantle, or scapulars.

Summary

Most field-identification treatments of North American dowitchers over-generalize. At best they attempt briefly to distinguish LBD from three distinct subspecies of short-billed dowitcher across an entire continent, and in some of many plumages and states of wear. Some rely too heavily on older studies that did not adequately distinguish among the short-billed dowitcher subspecies. Most lend too much emphasis to plumage differences, especially in our region. The difficult identification of dowitchers, however, especially long-billed vs. *hendersoni* short-billed, is aided considerably by local knowledge of these birds. In Ohio—and presumably elsewhere in the Midwest—it includes narrowing the likelihood of various subspecies, coupled with familiarity with dowitchers' contrasting migratory schedules and molt strategies.

This information can be far more useful in identifying dowitchers as to species than certain oft-cited fine discriminations in plumage and morphology. Any identification should be confirmed by voice if possible, but the date, age, and state of molt of an adult dowitcher constitute a less ambiguous start toward an answer. To identify a fall dowitcher in Ohio, do not despair if your field guide seems of little help with the birds you see, but proceed as follows:

- First, note the *date*. Compare it with the species' known schedules.
- Second, *age* the bird. There are reliable and reassuringly easy ways, well treated in most guides, to tell the dowitchers apart as juveniles.
- Third, note the state of *molt* of adults. Ohio birds in active molt or in basic plumage are LBDs. Those not in molt may be either, as some LBDs may not molt here, or may not have begun molting. LBD molt should be obvious by mid-August, and often earlier.
- Fourth, confirm by *voice* when possible, after you've learned their vocalizations in the field, or at least studied them on several good recordings. If dowitchers always cooperated by vocalizing, this would be the number one criterion for the experienced observer.
- Fifth, note certain *plumage* details. "Textbook" marks covered above are sometimes helpful, and often not. For adult birds in Ohio, we found no single plumage or morphological criterion consistently reliable—and

consistently visible—for separating the species. A combination of them in any particular case can be suggestive, however. It is also worth being alert for the *L. g. griseus* subspecies of short-billed; there are a few documented Ohio records of this form, and their adult plumage is much more unlike SBD's than is LBD's.

Finally, when books and articles don't seem up to the puzzles of field identification, consider consulting the bird specimens sleeping in the drawers at the nearest museum collection. Mute and motionless as they are, they have much to teach us.

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