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APPARENT HYBRID DOWNY WOODPECKER × HAIRY WOODPECKER IN COLORADO

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ABSTRACT: In external appearance, a confounding *Picoides* woodpecker encountered in Lamar, Prowers County, Colorado, on 15 May 2014 was closest to the Downy Woodpecker (*P. pubescens*), though its bill appeared oversized and its supercilium narrow. But its vocalizations closely resembled those of the Hairy Woodpecker (*P. villosus*). Examination of photographs and sound spectrograms of this individual strongly suggest that it was a hybrid between the Downy and Hairy Woodpeckers, a previously unreported combination.

On 15 May 2014, Mlodinow and Moore were birding at Lamar Community College in Lamar, Prowers County, Colorado, where a small stream runs through a narrow riparian corridor dominated by Plains Cottonwood (*Populus deltoides*) with a scattering of Green Ash (*Fraxinus pennsylvanica*). They heard a woodpecker “rattle” that sounded much like that of a Hairy Woodpecker (*Picoides villosus*) and quite different from the “whinny” of a Downy Woodpecker (*P. pubescens*). Almost immediately, the bird landed close to the observers, still giving rattle calls. The observers initially assumed it was a Hairy because of its vocalizations, though Moore did comment that the woodpecker seemed rather small for a Hairy, though large for a Downy. Both observers then noted the woodpecker’s limited white spotting on the wing coverts, consistent with a (presumed at the time) vagrant Hairy Woodpecker from the Rocky Mountains (*P. v. monticola*) rather than the nominate race of the Hairy expected on the Great Plains of eastern Colorado. Therefore, they considered subspecific identification before visually confirming the species

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involved. Mlodinow quickly began photographing the bird, and as he did so, both he and Moore became aware of problems with its identification. It then gave a couple “peek” calls, sounding to Mlodinow and Moore much more like a Hairy Woodpecker than a Downy. Moore quickly realized the importance of documenting the vocalizations and obtained audio recordings of the “peek” notes. For an excellent in-depth introduction to sound spectrograms, see Nathan Pieplow’s website <http://earbirding.com/blog/specs>; for simplicity’s sake, we “lump” harmonic and partial harmonic in the discussion below.

Although Short (1982), followed by Pyle (1997), lumped the Hairy Woodpeckers of the Colorado Rockies (median coverts unspotted) in subspecies *septentrionalis* (median coverts spotted; type locality Saskatchewan River, Saskatchewan), in the lack of a quantitative analysis supporting a heterogeneous subspecies that bridges a fundamental division of the Hairy Woodpecker, we use *monticola* (type locality Boulder County, Colorado) as the name for the birds of the Colorado Rockies (Bailey and Niedrach 1965, Leukering 2011)

DISTINGUISHING THE DOWNY AND HAIRY WOODPECKERS

In considering the identification of the Downy and Hairy Woodpeckers, it is important to understand that the interior montane subspecies of both differ substantially from their eastern counterparts (Leukering 2011). In both species, individuals from the Rocky Mountains have far less spotting on their wing coverts, tend to have a smaller white oval on the back, and have more black on the face (Mlodinow, Leukering pers. obs.) Additionally, montane Downy Woodpeckers (*P. p. leucurus*) average fewer black bars on the tail than do eastern birds (Pyle 1997), and montane Hairy Woodpeckers have a red nape spot that is not bisected by black as in eastern birds (Sibley 2000).

Size

Where the two species overlap, the Hairy Woodpecker averages considerably larger than the Downy. Male Hairy Woodpeckers from Colorado have a mean wing chord $130 \pm$ a standard error of 1 mm and a mean tail length of 84.1 ± 1 mm (Jackson et al. 2002). Male Downy Woodpeckers from western Colorado and areas to the west in the Rocky Mountains have a mean wing chord of 101.1 ± 1 mm and a mean tail length of 64 ± 1 mm (Jackson and Ouellet 2002).

Bill Length and Shape

The bill of the Hairy Woodpecker is longer and appears heftier in comparison to the shorter and more delicate appearing bill of the Downy. The mean bill length of Hairy Woodpeckers from Colorado is 35.8 ± 0.3 mm (Jackson et al. 2002), whereas that of Downy Woodpeckers from western Colorado and areas to the west in the Rocky Mountains averages 16.6 ± 0.4 mm (Jackson and Ouellet 2002). Additionally, the ratio of bill length to nasal-tuft length (front to back) is typically about 1.75 in the Downy and nearly always greater than 2.0 in the Hairy (Leukering unpubl. data).

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Plumage

Downy Woodpeckers from the Rocky Mountains eastward have zero to two full black bars on the tail beyond the longest undertail covert, whereas Hairy Woodpeckers lack barring on the tail, except in some specimens of subspecies *harrisi* and *picoideus* along the coast of the Pacific Northwest (Pyle 1997).

Per Sibley (2000), the red nape patch of post-juvenile males is typically undivided in the Downy, divided in the Hairy. However, many (most?) individuals of *P. v. monticola* show an undivided red nape patch.

The nasal tufts are proportionately larger and more bulbous in the Downy than in the Hairy Woodpecker.

The shoulder spur, when present, is a black mark extending from the black line on the side of neck onto the side of the chest. Typically this spur is absent or very short in the Downy and moderate to short in the Hairy, though exceptional Hairy Woodpeckers may lack this mark.

There appears to be little difference in supercilium width between the eastern subspecies of the Hairy and Downy Woodpeckers. The supercilium of Rocky Mountain Downy Woodpeckers is similar to that of eastern birds, but that of *P. v. monticola* appears narrower on average than in these Downy Woodpeckers, except in heavily worn plumage.

Call

In the Downy Woodpecker, the “peek” has three harmonics of roughly equal strength, whereas that of a Hairy Woodpecker has only two harmonics below 11 kHz, with the lower pitched being far stronger. The call note of the Hairy Woodpecker also averages longer than that of the Downy.

DISCUSSION

In our experience, when first seeing a bird that might be a Downy or a Hairy Woodpecker, most observers first key in on body and bill size. However, the observers of the Lamar bird assumed the incoming woodpecker was a Hairy because of its calls, especially the rattle, which was perceived to be that of a Hairy Woodpecker. Thus, the initial assumption was that the bird was a Hairy, whereas most viewers of the photographs would likely first consider it to be a Downy Woodpecker.

In the field, the size of the Lamar bird appeared confusingly intermediate. The bill length and thickness also appeared intermediate, contrary to how this bird appears in photographs. More objectively, the ratio of bill length to nasal-tuft length appears similar to that of a Hairy Woodpecker, not a Downy, whereas the size of the nasal tufts themselves is more intermediate. The bird's shoulder spur is consistent with that of Downy Woodpecker. As all subspecies of the Hairy Woodpecker occurring in or near Colorado lack tail barring, the barred tail is clearly a Downy Woodpecker feature. The Lamar woodpecker has a supercilium that is quite narrow, especially given no sign of substantial feather wear, and is thus consistent with *P. v. monticola* and would be atypical in either subspecies of the Downy Woodpecker known from Colorado. Therefore, visually, the Lamar woodpecker appears intermediate between

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Figure 1. Apparent Downy × Hairy Woodpecker photographed on 15 May 2014 at Lamar Community College, Prowers County, Colorado. In this image, the intermediacy of the bill size can be seen as well as the relatively small nasal tufts. The rather limited white back patch may be more typical of montane Hairy Woodpeckers than of montane Downy Woodpeckers. The undivided red nape patch is normal for the montane races of both species.

a Downy and a Hairy Woodpecker, though more like a Downy (see Figures 1 and 2). Notably, Moore and Mlodinow interpreted the bird's longer call (heard before bird was seen) as the rattle of a Hairy Woodpecker and not the whinny of a Downy. Furthermore, both to the ears of the observers and by analysis of the spectrogram, the bird's "peek" vocalization was much more similar to the call of a Hairy Woodpecker. The spectrogram of the "peek" vocalization resembles that of a Hairy Woodpecker in having only two harmonics, with a louder lower-pitched harmonic. Additionally, the notes of the Lamar bird were relatively long in duration, about 60 milliseconds, about 10–20 milliseconds longer than typical for a Downy Woodpecker, and within the range of the Hairy Woodpecker (see Figure 3).

Therefore we conclude the Lamar woodpecker was a Downy × Hairy Woodpecker. This hybrid has not previously been reported (McCarthy 2006), which is surprising as hybridization between *Picoides* woodpeckers is not exceptionally rare. For instance, hybrid Nuttall's (*P. nuttallii*) × Downy Woodpeckers are "occasional" in southern California, for which there are specimen records from San Diego County (Unitt 1986, 2004) and photo-

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Figure 2. Apparent Downy × Hairy Woodpecker photographed on 15 May 2014 at Lamar Community College, Prowers County, Colorado. Here one can see the barred outer rectrices, as in the Downy Woodpecker. Again, though the bill looks rather small for a Hairy Woodpecker, it is subtly longer than that of a Downy Woodpecker, especially when compared with the size of the nasal tufts. Note how narrow the supercilium is, likely beyond the range of any Downy Woodpecker not in exceptionally worn plumage.

graphs from Santa Barbara County. Additionally, hybrid Ladder-backed (*P. scalaris*) × Nuttall's Woodpecker are not unusual in the zone of contact in northern Baja California (Short 1982) and reported though rare in southern California. Miller (1955) reported a Ladder-backed × Hairy Woodpecker, and McCarthy (2006) listed records of other hybrid combinations of *Picoides*. Given the track record of hybridization among species of *Picoides*, one would expect a Downy × Hairy Woodpecker to have been detected previously. Perhaps the lack of such records is due not only to these species' similar appearance but also to their broadly overlapping ranges in which neither species is of particular note and a typical observer's scrutiny may be reduced.

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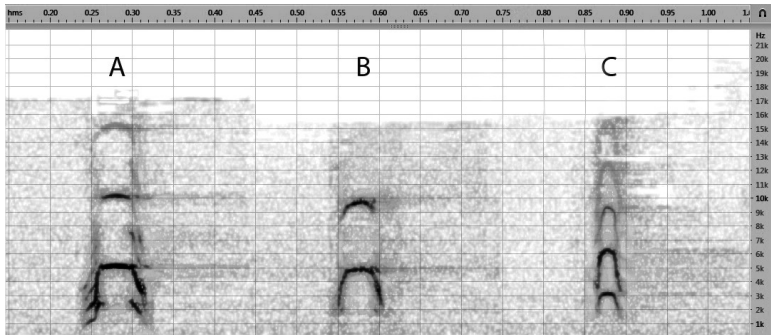


Figure 3. Spectrograms representing the “peek” call of the Lamar woodpecker versus “typical” examples of the Hairy and Downy Woodpeckers. (A) Hairy Woodpecker recorded in Routt Co., Colorado; catalog number 14434 at www.xeno-canto.org. (B) “Peek” call of apparent hybrid. (C) Downy Woodpecker recorded in Silver Bow Co., Montana, Xeno-Canto catalog number 142215. The call of the Downy Woodpecker has three distinct bands below 11 kHz versus two in the Hairy Woodpecker. The call of the Downy Woodpecker has two lower-pitched bands that are nearly equal in strength. In contrast, the call of the Hairy features one strong band at 6 kHz and a second higher-frequency band that is 20 db quieter. The Lamar bird’s spectrogram resembles that of the Hairy in that it has two bands below 11 kHz (versus three in the Downy) in which the basal band is louder than the higher-frequency band. Additionally, the duration of the Lamar woodpecker’s call is within the range of the Hairy Woodpecker’s.

Also, we thank Ted Floyd for his initial spectrographic analysis of the Lamar bird’s call and encouraging its use in the identification.

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