A Female Indigo Bunting in Male-like Plumage

Glenn Gabanski
7722 Sawyer Rd.
Darien, IL 60651-4819
email: ggabanski@fieldmuseum.org

Brian Kraskiewicz
3S580 Naperville Rd
Wheaton, IL 60189-8761
email: bkraskiewicz@dupageforest.org

ABSTRACT

We trapped an after-second-year female Indigo Bunting (Passerina cyanea) *in aberrant plumage, resembling a second-year male, at a MAPS banding station in a forest preserve southwest of Chicago on 24 May 2016. Sex was confirmed by the presence of a brood patch and captures in the two previous years where plumage and brood patch indicated a female. We know of no record of another female Indigo Bunting showing male-like plumage, but females showing male plumage have been reported in Lazuli Bunting* (P. amoena)*, Painted Bunting* (P. ciris)*, and other passerines.*

On 24 May 2016 we mist netted an Indigo Bunting (*Passerina cyanea*) at our MAPS (Monitoring Avian Population and Survivorship) banding station in Waterfall Glen Forest Preserve in DuPage County southwest of Chicago, Illinois. It was already banded with one of our bands from a previous year. While taking the bird from the net we noticed the body plumage strongly suggested a second-year (SY) male with a mixture of brown and blue body feathering (Fig. 1). However, a more thorough examination of the bird at the banding table yielded conflicting indicators for age and sex. A mostly blue crown, brown cheeks, bluish breast, and a brown back with some blue suggested a SY male. But conflicting signals included a strong blue rump, basic-like primary coverts (black with blue edges), and lack of an eccentric signal in the wing, all of which suggested an after-second-year (ASY) bird and probably female due to the extensive brown in the flight feathers (Fig 1). Confirmation that it was a female was the obvious brood patch.

Fig. 1. Wing of an after-second-year female Indigo Bunting showing blue edging in the primary coverts, lack of a molt limit in the flight feathers, and uniform brown color to the primaries and secondaries. Additional photographs of this bird are at http://ebird.org/ebird/view/checklist/S34350672

After inspecting our previous banding records, it was clear that this bird was, in fact, a female in her fourth year. She was first captured on 10 Jul 2014 and was aged as an SY based on skull and plumage characteristics (Pyle 1997, Payne 2006). She was recaptured twice the next summer on 16 Jun 2015 and 24 Jul 2015 and both times was aged and sexed as an ASY female due to plumage and a brood patch (Pyle 1997, Payne 2006). Photos taken of the bird in 2015 showed she had signs of male-like plumage but not as strong as in 2016. Age criteria, brood patch, and prior banding records still led us to determine the bird to be an ASY female. In addition to the capture in May 2016, we recaptured her on 7 Jun 2016 and 12 Jul 2016. All captures that year showed a brood patch suggesting she was actively breeding.

Beginning in 1992 our station has recorded 358 captures of Indigo Buntings (202 individuals and 156 recaptures). During that time we have never seen another female with male-like plumage. After sharing photos of this bird with Peter Pyle, he responded that he could not recall having seen an Indigo Bunting like ours but had seen at least one Lazuli Bunting (*Passerina amoena*) and several Painted Bunting (*Passerina ciris*) ASY females with male-like plumage. In each case similar body-plumage (partial but not entirely male-like) and wing-feather criteria were used to assume ASY female. He went on to say "Given how variable and complicated Indigo Bunting molts and plumages are, it does not surprise me to see this - either due to an older female that is losing her estrogen or a bird that molted very early or late and had signals for blue come into it. Both of these things seem to happen in dichromatic North American passerines." (Pyle, personal comm.)

There are scattered records of females of other species showing male-like plumage (e.g., Bergtold 1916, Stoddard 1921, Buchanan and Parkes 1948, Perlut 2008), as mentioned in Sealy (2017). The appearance of males in female-like plumage has been reported by Rimmer and Tietz (2001) and Sealy (2017) for Blackpoll Warbler (*Setophaga striata*). It is possible that the variable plumages displayed by SY male Indigo Buntings have helped prevent previous detection of adult females in male-like plumage.

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