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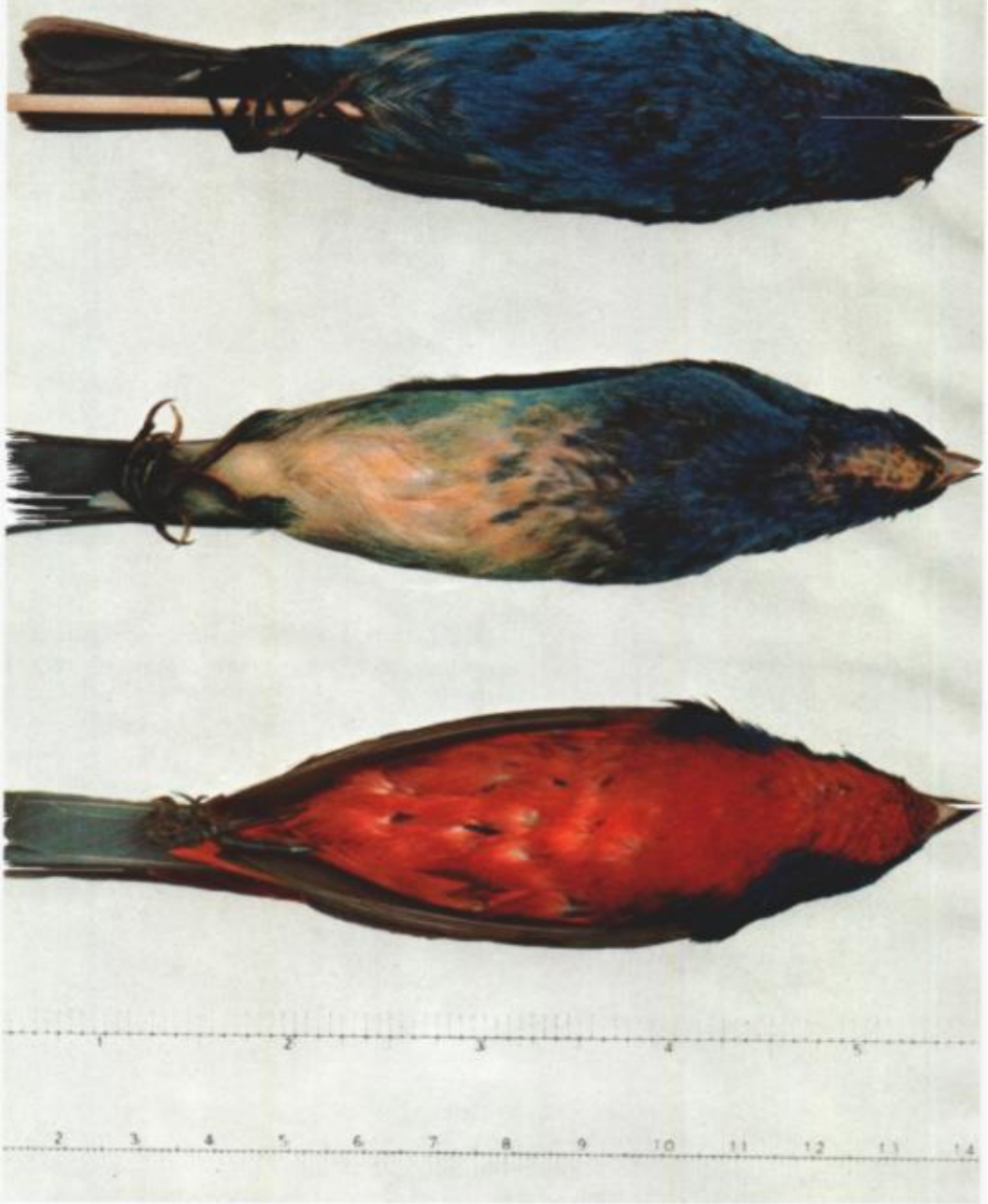
No. 3

A NEW HYBRID BUNTING (*PASSERINA CYANEA* × *PASSERINA CIRIS*)

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FOUR buntings of the genus *Passerina* breed in the United States: Indigo (*P. cyanea*), Lazuli (*P. amoena*), Varied (*P. versicolor*), and Painted (*P. ciris*). Adult males differ greatly in color; the male Painted Bunting is the most colorful and perhaps the gaudiest of all native North American passerines. In contrast, adult female Indigo, Lazuli, and Varied Buntings are brownish in coloration and closely similar. The distinct yellow-green female Painted is quite unlike any other native North American bird in color (Robbins et al. 1966). Breeding ranges broadly overlap between the Indigo and Lazuli, the Varied and Painted, and the Indigo and Painted; breeding ranges of the Lazuli and Varied and of the Varied and Indigo barely meet.

For some time it has been known that the very closely related Indigo and Lazuli buntings hybridize in the Great Plains, but interbreeding is not random (Sibley and Short 1959, Short 1969). Mayr and Short (1970) consider these two buntings as species comprising a superspecies, but Phillips (*in* Phillips et al. 1964) considers these buntings conspecific. One record of hybridization between the Painted and Varied buntings is known (Storer 1961). Storer believes the Painted and Varied buntings are probably less closely related than are the Indigo and Lazuli buntings. As the ranges of the Painted and Varied buntings overlap broadly and only one hybrid is known, apparently their distant relationship makes hybridization rare. Short (pers. comm.) believes that the Varied Bunting is more closely related to the Indigo and Lazuli than is the Painted Bunting. Despite the closer relationship of Varied and Indigo buntings, which have not hybridized in the wild, the vastly greater range overlap of Indigo and Painted buntings makes the likelihood of even their rare hybridization greater than between the former two (Short, pers. comm., see Mayr and Short 1970).



Ventral views of male Indigo and Painted Buntings and their hybrid (center)

(From a Kodachrome by Thomas N. Wheeler)

TABLE 1
DIFFERING COLOR CHARACTERS OF THE HYBRID AND ADULT MALE INDIGO AND
PAINTED BUNTINGS

Item	<i>P. cyanea</i>	Hybrid ¹	<i>P. ciris</i>
Crown color	Deep blue-violet	I	Purple
Back	Light blue	I → cy	Golden green
Rump	Light blue	I → cy	Dull red
Throat	Deep blue-violet	I → ci	Red-orange
Breast and abodmen	Blue	I → ci	Red-orange
Remiges and rectrices	Dark brown	I → cy	Red-brown
Greater second- ary coverts	Black and blue	I → cy	Black and green
Eye-ring	Absent	I → ci	Red-orange
Crissum	Blue	I → ci	Red-orange

¹ I = intermediate; I → cy = tending toward *cyanea*; I → ci = tending toward *ciris*.

Among 61 nocturnal migrants of 17 species found dead on 22 April 1971 after hitting the Vertical Assembly Building (VAB), Cape Kennedy, Brevard County, Florida, was a male hybrid between the Indigo and Painted buntings (Frontispiece). The specimen represents the first documented hybrid between these two eastern buntings. Other fringillids in the kill were two adult male Indigo Buntings, one adult male Painted Bunting, one Savannah Sparrow (*Passerculus sandwichensis*), one Grasshopper Sparrow (*Ammodramus savannarum*), and two Swamp Sparrows (*Melospiza georgiana*).

The two parental species show at least 10 major points of difference in male plumages (Table 1). In all color characters the hybrid is distinctively phenotypically intermediate but it appears to resemble the Indigo Bunting more closely in plumage coloration and in mean lengths of the wing chord and tail.

The wing chord of six spring adult male Indigo Buntings varies from 65.3 to 69.2 mm (mean 67.5). Tail length varies from 48.0 to 53.7 mm (mean 51.6). Wing chord of six spring adult male Painted Buntings varies from 68.0 to 72.0 mm (mean 70.1). Tail length varies from 55.0 to 56.0 mm (mean 55.5). Wing chord and tail length measurements of the hybrid are 67.5 mm and 50.5 mm, respectively. The shape of the bill appears to be closer to that of the Painted than to the bill of the Indigo.

A description of the hybrid's plumage follows (see Table 1). The forehead, crown, and occipital regions of the head and the nape and sides of the neck are solid rich blue. These areas are lighter than the deep blue violet on the forehead and crown of the adult male Indigo and the purple on the head of the adult male Painted. Lores are black

and a light pink eye-ring is present. The back is green-blue and the rump and upper tail coverts are turquoise. The sides are light blue-green whereas the flanks contain yellow-green, pinkish, and turquoise feathers. On the ventral surface, the chin, gular region, and abdomen are pale pink. Flecks of blue occur in the chin and gular region. The feathers on the abdomen are more rosy than those on the throat and are bordered by pale yellow-green feathers. The crissum is dull yellow. The breast and the ventral part of the neck contain blue feathers interspersed with pale green and light pink flecks. Feathers on the lower part of the crus are green-blue. Primaries, secondaries, tertials, and rectrices are blackish with the majority edged with blue-green. Upper greater secondary and upper lesser wing coverts are black at their bases and bluish at their tips. The black upper greater primary coverts are edged with blue. The color pattern of the coverts is similar to that found on the male Indigo Bunting except the blue-green tips of the hybrid are replaced by rich blue tips in the Indigo. Bend of the wing is blue.

The hybrid has been deposited in the National Museum of Natural History where it bears the number USNM 567021.

I thank Lon Ellis and Robert Bush of Merritt Island for allowing me to describe the hybrid that they collected. Leslie Case prepared the hybrid into a study skin for Ellis. The comments by Lester L. Short in a letter dated 15 October 1971 to Ellis were helpful. I thank Thomas N. Wheeler of the Chemistry Department, Florida Technological University, for the excellent photograph. The frontispiece was supported in part with funds from the Florida Technological University Foundation, Inc.

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