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BLUE-WINGED × CINNAMON TEAL HYBRID FROM OKLAHOMA

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In their classic revision of the Anatidae, Delacour and Mayr (1945) recognized use of a broad spectrum of biological features to determine phylogenetic relationships. For example, behavioral data were considered in addition to the more traditional anatomical and plumage characteristics of ducks, geese and swans in determining tribal affinities and the appropriateness of combining genera. The occurrence of hybridization provides insight into the closeness of relationships among birds (Sibley 1957), especially among anatids where more hybrids are known than in any other avian family (Johnsgard 1960). Gray (1958) has recorded about 400 waterfowl hybrids.

For 2 species of the blue-winged ducks (*Anas*, Anatini) of North America—the Blue-winged (*Anas discors*) and Cinnamon (*A. clypeata*) teals—the females are essentially indistinguishable and their breeding ranges are partially sympatric. Detection of hybrids of these species, while known from avicultural records (cf. Gray 1958), has therefore been limited.

For several decades notes in the literature have described, in varying degrees of completeness, male hybrid Blue-winged × Cinnamon teals from the wild. In the course of borrowing these specimens, an additional hybrid was located in Utah that had not been described in the literature; this bird and others in collections were examined and described elsewhere (Bolen 1978) except for a bird prepared as a taxidermist's mount (good description in Harris and Wheeler 1965). The Frontispiece, by George M. Sutton, portrays for the first time details of the facial features of the 4 available hybrids previously described in the literature plus a more recent hybrid from Oklahoma.

OKLAHOMA SPECIMEN

At Lake Overholser, Oklahoma Co., Oklahoma, a male Blue-winged × Cinnamon teal hybrid was taken by John D. Newman on 10 March 1977, and



Drake Blue-winged Teal X Cinnamon Teal Hybrids.
Watercolor from prepared specimens by George Miksch Sutton.

TABLE 1
MEASUREMENTS FOR 5 HYBRID MALE BLUE-WINGED TEAL × CINNAMON TEAL

Measurements	Locale				
	Texas ^a	Utah ^b	Utah ^c	California ^d	Oklahoma ^e
Total length	379	336 ¹	374	407	387
Tail	65	47	72	—	61
Wing	183	178	186	183	193
Exposed culmen	48	43	40	48	42
Greatest width of culmen	18	17	16	19	17
Tarsus	30	30	31	—	32
Middle toe	38	35	36	—	38

^a Bolen (1978); Welder Wildlife Foundation Museum No. 2081.

^b Wilson and van den Akker (1948); Univ. of Utah Museum Zoology No. 22203.

^c Bolen (1978); Univ. of Utah Museum Zoology No. 17474.

^d Harris and Wheeler (1965); Humboldt State College No. 957.

^e Previously unreported specimen; Univ. of Oklahoma Stovall Museum No. 12718 and G. M. Sutton No. 16280.

¹ Neck of this specimen foreshortened in preparation of skin.

presented to George M. Sutton for preparation and accession in the University of Oklahoma Museum (No. 12718). Standard measurements for the Oklahoma hybrid are generally similar to those reported elsewhere (Table 1).

Facial features include the prominent black chin extending 12 mm posterior to the lower mandible, a characteristic that seems distinctive among each of the hybrids I have examined. The white crescent, perhaps the most obvious feature of males suggesting hybridization in these species, is an 8 × 3 mm marking anterior to the eye, faintly connected to a 1–2 mm wide line paralleling the bill's margin; the white facial marking extends just over the eye and thereafter diminishes into the darker occiput plumage. The white facial plumage of the hybrids, although clearly present, is highly variable in its location and extent (see Frontispiece). Harrison and Harrison (1971) have shown that among certain blue-winged ducks, the white facial crescents appear as a result of hybridization via heterophoric reverse mutation; this feature becomes a dominant recessive in hybrids involving the Northern Shoveler (*A. clypeata*), Red Shoveler (*A. platalea*), and Cinnamon Teal, each without white crescents in the adult male plumage.

The Oklahoma hybrid has the prominent black spotting on the upper breast, abdomen, and flanks typical of a drake Blue-winged Teal. These markings are present, but in varying degrees of prominence, among the other hybrids examined earlier (Bolen 1978). In all 5 specimens, the breast and abdominal plumage is clearly dominated by cinnamon coloration.

The prominent white flank marking of male Blue-winged Teal varied

among the 5 hybrids from conspicuously "light" in the California birds (Harris and Wheeler 1965) to tan in the Texas specimen (Bolen 1978). This marking was distinguishably whitish in the Oklahoma hybrid but washed with a cinnamon cast.

Blue-winged Teal males generally have shorter bills (range 39–45, \bar{x} = 42 mm, Palmer 1976:463) than do Cinnamon Teal males (range 44–47, Palmer 1976:483), but the culmen lengths of all 5 hybrids overlapped any species-specific distinctions. Lamellae in the Oklahoma hybrid, as in the others, were well developed and prominent laterally along the proximal $\frac{1}{2}$ of the bill.

Iris coloration is difficult to describe or represent pictorially since only the examination of fresh specimens enables accurate artwork. Some of the available literature mentions iris coloration ("... reddish, fading to yellowish at the outer edge," Harris and Wheeler 1965) of freshly collected specimens whereas others do not (Wilson and van den Akker 1948). George M. Sutton examined the Oklahoma hybrid and described the iris as orange-brown. Palmer (1976:467) described the iris of Blue-winged Teal as dark gray-brown and those of Cinnamon Teal as orange or scarlet after 8 weeks (Palmer 1976:486). Since this feature is variable among Blue-winged \times Cinnamon hybrids, immediate attention should be given to determining iris coloration whenever new specimens are obtained.

Finally, the Oklahoma specimen represents the easternmost record in the known distribution of Blue-winged \times Cinnamon hybrids. Whereas Blue-winged Teal are found throughout much of North America, including a major migration corridor through eastern Oklahoma (Bellrose 1976:278, map), the Cinnamon Teal is predominately a western species with major migration corridors in the Pacific Flyway and western Central Flyway (Bellrose, 1976:289, map).

I am indebted to George M. Sutton for his review of this manuscript and for his usual artistic excellence in preparing the accompanying illustration for the Frontispiece.

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COLOR PLATE

The color plate Frontispiece of the Blue-winged \times Cinnamon Teal hybrid has been made possible by an endowment established by Dr. George M. Sutton.