

A BROWN-EYED ADULT RED-EYED VIREO SPECIMEN

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Abstract.—Iris color is normally used for aging fall migrant Red-eyed Vireos (*Vireo o. olivaceus*), those with brown irides being considered birds of the year and those with red irides at least a year old. An adult specimen with brown irides captured on Great Gull Island, New York, 1 Sep. 1985, demonstrates that reliance on iris color alone is not sufficient for age determination.

UN ADULTO DE *VIREO O. OLIVACEUS* CON LOS OJOS PARDOS

Resumen.—El color del iris de los ojos es comúnmente utilizado para determinar la edad de especímenes de *Vireo o. olivaceus* durante su emigración otoñal. Aquellos especímenes con el iris pardo se consideran juveniles del año, mientras que especímenes de iris rojo se consideran adultos de al menos un año de edad. Un espécimen adulto capturado el 1 de septiembre de 1985 en New York, resultó tener el iris pardo. Esto demuestra que no es confiable el utilizar únicamente el color de los ojos en estas aves para determinar su edad.

Iris color has been the standard criterion for bird banders in separating age classes of North American Red-eyed Vireos (*Vireo o. olivaceus*) in the fall. Birds in their first fall (HY [hatching year] of banding terminology) are said to have the iris “brown,” whereas in those over a year old (AHY [after hatching year]) the iris is said to be “red” (Blake 1962:171; Wood 1969:97) or “pale to deep red” (U.S. Fish and Wildlife Service 1980).

On 1 Sep. 1985, I netted a Red-eyed Vireo on Great Gull Island, New York, the field station of the American Museum of Natural History in Long Island Sound, about 12 km S of New London, Connecticut. I was struck by the fact that the bird was undergoing a heavy molt; back, breast, chin, scapulars, tail coverts, and all rectrices. The fact that the rectrices were growing indicated that the bird was an adult (AHY), as the first prebasic molt of this species is confined to the body, some of the wing coverts, and sometimes the tertials (U.S.F.W.S. 1980; Dwight 1900:236). Although I have found as many as 30% of adult tower-killed Red-eyed Vireos to be in the last stages of flight feather molt (Cannell et al. 1983: 626), and an even higher proportion with scattered light body molt, I had never handled a migrant Red-eyed Vireo that was molting as heavily as the Great Gull Island bird. Although this bird was not killed in the act of migrating, as is the case with tower casualties, it is unlikely that it could have been on Great Gull Island more than a day or two (the island is very small, with little vegetation suitable for migrating vireos, and the netting effort in these areas was intense). The vireo had obviously begun a heavy molt prior to crossing either the 12 km of open water from the north or the approximately 4.8 km of open water from Plum Island to the west (where there is breeding habitat for this species, unlike Great Gull Island). The symmetry of the rectrix molt in this bird, and its coincidence in timing with the molt of other tracts, indicated that the

represent replacement of adventitiously lost rectrices; such adventitious loss is seldom symmetrical unless *all* tail feathers are lost, in which case the regrowth is simultaneous rather than staggered.

As peculiar as the heavy molt in a migrating bird was the iris color, recorded on the specimen label (in the absence of any standard color charts) as "Iris bright chestnut, *not* red." Because of these peculiarities, I collected the specimen (now Carnegie Museum of Natural History 153634). In spite of its iris color, but in concordance with the molt pattern, this vireo had the fully pneumatized cranium of an adult bird. The Red-eyed Vireo is not a species in which pneumatization takes place so rapidly that only those individual fall birds with "windows" remaining in the cranium can be safely aged. On the contrary, 25 yrs of data accumulated by R. C. Leberman at Powdermill Nature Reserve (Carnegie Museum of Natural History's field station in Westmoreland Co., Pennsylvania) prove that this is one of the relatively few oscine species that frequently retain small cranial "windows" for two years or more. Thus, in spite of having had the iris color expected of an HY bird, this Red-eyed Vireo was unequivocally more than a year old.

Ned K. Johnson has called my attention to the fact that the South American races of *Vireo olivaceus* (formerly considered a separate species, *V. chivi*) have brown rather than red irides. He suggested that it was at least conceivable that the Great Gull Island bird might be a member of one of the strongly migratory Southern Hemisphere populations that had "overshot" its northward migration, a phenomenon well known in such species as the Fork-tailed Flycatcher (*Tyrannus savana*). Carnegie Museum of Natural History has an excellent series of South American *V. olivaceus*, and CM 153634 bears no resemblance to any of them. Zimmer (1941) discussed the differences between *olivaceus* and *chivi*, the most strongly migratory and longest-winged southern race; CM 153634 matches *olivaceus* in all color and wing formula characters, and at 80 mm its wing length is clearly that of *olivaceus* (73–85 mm, *vide* Zimmer) rather than *chivi* (63–74.5).

Although there have been studies of the timing of iris color change with age in a few other passerines, notably jays (Davis 1960, Hardy 1973), I know of no such research on Red-eyed Vireos.

Banders handling fall migrant Red-eyed Vireos should age members of this species by a combination of degree of cranial pneumatization ("skulling") and iris color rather than relying on the latter character alone. The heavy molt exhibited by the Great Gull Island specimen was unusual, and not to be expected in most migrants of this species, but when present it is an additional character indicating adult age.

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