

On Separating Female and Immature *Oporornis* Warblers in Fall



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Figure 1. Typical immature Connecticut Warbler, caught 12 October 1987 on Southeast Farallon Island, California. The eye ring is characteristically very full; note also the buffy throat, heavy brownish cast to the breast and upperparts, and dingy yellow underparts that enable easy separation from the other *Oporornis*, including Mourning Warblers with full eye rings. The dingy plumage of this bird, along with the measured wing length and incompletely pneumatized skull, suggests that it is an immature female.

by Peter Pyle* and Phil Henderson*

Southeast Farallon Island is perhaps the best place in North America to study the field separation of difficult-to-identify, passerine sibling species. Nowhere else do so many eastern and western land-bird migrants regularly mingle, and by capturing most of them for banding we are given the opportunity to study

them up close, measure them, and augment our understanding with information on their age and sex. The island's open terrain especially favors the detection and study of typically skulking species, such as the *Oporornis* warblers, which we often find foraging on the island's barren slopes. Perhaps this is the main

reason why we have recorded thirty-six Mourning Warblers (*O. philadelphia*) and thirty-two Connecticut Warblers (*O. agilis*) on Southeast Farallon, representing over 50 percent of California's records of these species.

Our understanding of the field identification of fall immature *Oporornis* warblers (i.e., birds in first basic plumage) has steadily developed since the Point Reyes Bird Observatory began daily monitoring of land-bird occurrence on the island in 1968. We have had little trouble distinguishing Connecticut Warblers by their full eye rings, duller plumage, chesty appearance, and habit of walking rather than hopping. But it was not until 17 to 26 September 1974, when we documented our first five Mourning Warblers, that our ability to separate immatures of this species from MacGillivray's Warblers (*O. tolmiei*) began to improve. As with other geographically separated sibling species, treatment of fall immatures of these two in the field

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Figure 2. Connecticut Warbler, Southeast Farallon Island, 21 September 1987. The very full eye ring, dark throat, and greenish upperparts, along with a completely pneumatized skull, indicate that this is an adult female.



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guides has been, and still is, scant or misleading.

Prompted by Allan Phillips (1947), Wesley Lanyon and John Bull (1967) published a paper in *Bird-Banding* indicating that most *Oporornis* warblers could be identified by the flat-wing length minus the tail length. They found this calculation to be 2 to 11 mm in MacGillivray's, 10 to 18 mm in Mourning, and 19 to 27 mm in Connecticut. Although these specimen-based calculations may differ slightly from those of live birds (we have found smaller ranges and less overlap on live birds measured on Southeast Farallon), this paper enabled us to identify most fall immature Mornings that we captured. These flat-wing/tail differences, however, are of little value in the field.

In documenting the first California Mourning Warbler in 1968, Guy McCaskie (pers. comm., 1970) observed that this immature bird's throat was yellow, which differed from the typical whitish or grayish-buffy throat coloration of an immature

MacGillivray's. In 1974 we confirmed this difference on Southeast Farallon, and throat color subsequently became the popular standard used in separating Mourning from MacGillivray's in first basic plumage. Recently, however, exceptions to this standard began to appear on the island: dull MacGillivray's with yellow throats and a probable fall adult female Mourning with a white throat. We had to find other indicative plumage criteria. As the records of Mornings increased, we developed a good understanding of the differences in the color, width, extent, and abruptness of the eye rings of the two species. We now feel that we can separate most birds by using just throat color and eye-ring features, and close to 100 percent of the individuals by using a combination of *all* plumage characters.

The purpose of this article is to discuss and illustrate with photographs of hand-held birds differences in the plumage of fall female and immature *Oporornis* warblers. We do not intend it to be an exhaustive treatment of the

subject. We wish only to make observations that have not been widely published in the field-identification literature, in hopes of stimulating further discussion and, hence, advancement in our understanding of this topic.

Aging and Sexing Fall Oporornis

The accurate aging and sexing of birds in the field is always of value, as knowing the age and sex class will often assist with the identification. Understanding the extent and timing of molts is an important starting point. In Connecticut, Mourning, and MacGillivray's warblers, both juveniles and adults molt on the breeding grounds in July–August—juveniles into first basic plumage (a partial molt) and older birds into definitive basic plumage (a complete molt). The prealternate molt is partial (body plumage only) and takes place on the wintering grounds in February–April. In the field, the first alternate (first spring) plumage of males is similar to the definitive alternate plumage.



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Figure 3. Immature Connecticut Warbler, Southeast Farallon Island, 10 October 1982. Although the throat on this bird is atypically yellowish, note the brownish wash across the breast. Note also the small and abrupt breaks in the eye ring. The measured wing length, perhaps in combination with the brighter plumage, suggests a male.



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Figure 4. A dull immature Mourning Warbler, Southeast Farallon Island, 6 September 1989. Although almost complete, the eye ring on this bird is quite indistinct, narrow, and yellowish, as is common in immature Mournings. The break on the anterior portion is also tapered, unlike the abrupt breaks found in Connecticut and MacGillivray's warblers. Birds in this plumage may be confused with immature Common Yellowthroats (*Geothlypis trichas*), but note that the latter are typically browner above, have dingier underparts contrasting with brighter throats and undertail coverts, and have duller fleshy legs as compared with bright pink legs in the *Oporornis* warblers. The extremely dull plumage and pale gray suffusion to the head, along with the measured wing length, indicate that this bird is an immature female.

In males, the definitive basic (adult nonbreeding) plumage appears very similar to the definitive alternate (adult breeding) plumage; these birds are easily separated from the other age and sex classes in fall by their extensive dark hoods and are identified to species by the extent of their eye rings (but see Pitocchelli [1990] for recent documentation of occasional adult male Mourning Warblers with partial eye rings that are usually "weaker" than those found in MacGillivray's). The field separation of the other three age and sex classes in fall is not as easy and should not be attempted with all individuals.

The least understood plumage in *Oporornis* is that of adult females in fall (i.e., birds in definitive basic plumage). In MacGillivray's this plumage may be impossible to distinguish from that of immatures (i.e., birds in first basic plumage), although if it resembles the alternate plumage of spring, the throat might be distinctly whiter than the dingier grayish-white, buffy, or yellow-

ish throats of immatures. In Connecticut, the eye ring probably averages whiter and thicker in adult females (being often thinner and slightly buffy in immatures), the upperparts may be greener, and the throat may be darker; but these characters are yet to be fully tested. Most references and field guides indicate that adult female Mourning Warblers in alternate plumage have a pale gray or white throat (but see photo of a "breeding female" in the *Audubon Society Master Guide to Birding*, v.3, p. 173). If the definitive basic plumage is similar, the white or gray throat would distinguish them readily from the yellow-throated immatures. The extent of variation in the plumages of fall adult female *Oporornis* warblers, especially as related to throat color, has yet to be determined, however.

The sexing of immature Mourning and MacGillivray's warblers in fall is also problematic, with much overlap in plumage features. Immature males of all three species of *Oporornis*

have, on average, a more extensive and darker gray suffusion to the crown than do immature females, but there is a good deal of overlap in this character. It may be impossible to sex immature Connecticut Warblers on plumage alone. Many immature male Mourning and MacGillivray's warblers in basic plumage have a few black feathers on the upper breast and on this basis are separable from the other age and sex classes. Immatures that lack these black feathers may be of either sex; in MacGillivray's, look for grayer tones to the head, breast, and lores of immature males versus the more buffy-washed head, breast, and lores in females; and in Mourning, look for darker and more distinct grayish breast-patches on males than on females, occasionally forming a complete breast band.

In sum, there is much overlap in plumage characters useful in aging and sexing immature and female *Oporornis* warblers, and many individuals should be left uncategorized when viewed in



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the field. In the hand, aging and sexing of *Oporornis* is greatly aided by wing and tail measurements, the extent of pneumatization of the skull, and the relative shape and condition of the flight feathers, which are retained by immatures but replaced by adults during the prebasic molt. When these criteria are combined with plumage characters, almost all fall birds can be aged, and up to 60 percent of fall immatures can be reliably sexed. The figure captions in this article contain further comments on the age and sex of these hand-held birds. See also Pyle et al. (1987) for more information on aging and sexing *Oporornis* warblers and passerines in general.

Connecticut Warbler

Immature and female Connecticut Warblers are readily separated from Mourning and MacGillivray's warblers by a combination of their thicker, fuller-looking eye rings, larger bills, buffy throats that usually lack yellow, brownish cast to the upper breast and upperparts, and dingier yellow underparts (Figures 1 and 2). In the field they also usually walk when foraging; their posture is plumper than in the other two species, resembling that of the Ovenbird (*Seiurus aurocapillus*) or a *Catharus* thrush; they are longer-winged; and their call note is a slightly higher-pitched *chip* than that of Mourning Warbler and is softer than that of MacGillivray's. (All three species

of *Oporornis* also give a thin *zeet* flight call typical of most warblers.) Although the eye rings of Connecticut Warbler can occasionally be broken (Gustafson 1988), these breaks are much smaller than those found in the eye rings of MacGillivray's and more abrupt than in those of Mourning (whose eye ring is also distinctly thinner and usually yellower). The throat color in Connecticut can occasionally appear yellowish (Figure 3), but on these birds a broad, suffuse, and olive or brownish breast band separates the paler throat from the belly. Although complete breast bands are occasionally found in immature male Mourning Warblers (see Figure 7), they are typically grayer, narrower, and less suffused with pale coloration than those of Connecticut. Immature Mourning Warblers with full eye rings can be further separated from Connecticut Warblers by their smaller bills, brighter yellow throats and underparts, and lack of brownish tones to the upperparts. Mournings and MacGillivray's both usually hop in the field and look thinner and sleeker than Connecticut.

Throat Color

On its own, the presence or absence of yellow in the throat will probably separate 90 percent of Mourning and MacGillivray's warblers in first basic plumage. Fall immature Mourning Warblers (Figures 4–7) typically have bright yellow throats that usually



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Figure 6. Immature Mourning Warbler, Southeast Farallon Island, 20 September 1989. The eye ring of this bird is fairly distinct and relatively abbreviated but does not approach that of MacGillivray's in appearance and is otherwise quite typical of immature Mourning Warbler. The plumage and measured wing length suggest that this bird might be a female, but we left it unsexed in our banding data.



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Figure 7. Immature male Mourning Warbler, Southeast Farallon Island, 8 September 1988. A small percentage of immature males show a complete breast band; in comparison with those typically found in Connecticut and MacGillivray's, however, it is grayer, narrower, and less suffuse. The eye ring of this individual is typical of Mourning and, along with a flat-wing/tail difference of 13 mm, confirms the identification.

