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## The Known Birds of North and Middle America Versus the Current AOU List

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Certain points in Banks' (1991) perceptive review of Part I of my *Known Birds of North and Middle America* (Phillips 1986) call for comment, although I agree with most of his conclusions. Truly, our knowledge will never be static or complete. Additional keys, and fuller citations of the literature (with full discussions and citations of erroneous reports), would indeed have been helpful, had my work been supported. And perhaps I do have "an almost uncanny ability to see minor color differences," mainly at the edges of species' ranges, but should we not conserve biodiversity, even when not very obvious?

Some of Banks' comments are now sufficiently answered in my Part II (1991): the advantages of cotypes (p. xxxv-xxxvi, 83); ignoring in AOU (1983) of subspecies or supposed subspecies (p. xxiii; see also AOU 1983:xxv, xxviii); and English names (p. 220-221); it is indeed unfortunate that AOU [1983] did not follow Banks' suggestion).

As to Alden Miller being my "favorite target," it was Miller himself (in Miller et al. 1957:116, 139, 142, 144, 145, 146, 169, 179, and 216) who absolved his checklist coauthors of all responsibility for the misstatements in its accounts of my Part I families. I agree that the number of corrections seems excessive, but in view of Miller's high standing in the international scientific "community," readers would otherwise assume his reports were gospel and that I had overlooked them.

One problem, however ("of individual vs. conservative committee thinking"), does call for clarification. Besides the case of *Aimophila* ("*Amphispiza*") *quinquestrata* (Phillips and Phillips 1993), consider the cases of "*Empidonax occidentalis*" vs. *Stelgidopteryx ridgwayi*, recently split off as distinct species. The *Empidonax*, whose distinctness was suggested by Johnson and Marten (1988), was promptly recognized by the AOU Committee (1989), while the swallow, which I distinguished in 1986 (Phillips 1986:4, 21-25), remains unrecognized by them. To judge their conservatism, let us examine the facts:

(1) *Characterization and distributions*.—In my key and text (supplemented by a colored frontispiece), I defined the species *ridgwayi*, showed differences in color pattern and structure (verifiable in any major museum), and gave the distributions of all species (and subspecies) at all seasons. Johnson and Marten (1988) gave no morphological definition, key, plate, difference in color, pattern, or structure, nor distribution in winter or migration. Even for the breeding season, they gave no distributions outside of a small area in or near California.

(2) *Structure*.—The furca (depth of the tail fork) of *ridgwayi* shows little or no overlap, within sexes, with other American *Stelgidopteryx*. Within the *E. difficilis* group (including *E. "occidentalis"*), there are no structural differences north of Baja California Sur, where the dull *cineritius* has a somewhat more rounded wing and narrower bill (Phillips et al. 1964). However, *cineritius* remains unremarked and unnoticed by Johnson and Marten (1988) or by the Committee, while less distinctive California forms tend to become "species."

(3) *Color and size*.—Other northern *Stelgidopteryx*, of comparable season and museum age ("foxing"), do not approach the dark color of *ridgwayi*; the pattern (crissum and supraloral spot) also differs, but size does not.

Races of the *E. difficilis* complex do not differ in pattern, but some more southern races differ from northern in color: the dull *cineritius* (particularly the juvenal; fide Ridgway 1907); and the bright *flavescens*. These seem to intergrade with northern races in Baja California Norte and in the higher mountains of southern Oaxaca (*annectens* Phillips 1966; see Part I:xxviii). True *flavescens*, however, may prove to be a distinct species found only south of the Nicaraguan lowlands.

After Johnson (1980:114) questioned the recognition of *cineritius*, it was a surprise to read (Johnson and Marten 1988:177) that "Insular, coastal, and interior populations of the western United States, however, are strongly differentiated in size, color, voice, and preferred habitat (Johnson 1980)." This was directly contrary to all earlier revisers. Ridgway (1907) had included all United States populations in one race, whereas Brodtkorb (1949) said *insulicola* of the California islands "appears to be" distinct, and I (in Phillips et al. 1964) recognized it. However, we all agreed that *cineritius* was decidedly more distinct, and that all other (mainland) United States populations were colored alike. Size differed, but not sharply (see Behle 1948, Brodtkorb 1949, etc.; Table 1).

(4) *Nesting*.—Other *Stelgidopteryx* nest in dirt banks, or rarely (where these are not available?) in holes in trees. *Stelgidopteryx ridgwayi* nests in crevices among rocks (or buildings?), especially in wells (cenotes) in Yucatán.

Nests of Western Flycatchers vary considerably, locally and individually; but no consistent geographic differences are evident. Johnson and Marten (1988:177) stated that "*Empidonax d. difficilis* and *E. d. hellmayri* nest sympatrically," but describe no differences in nests.

TABLE 1. Average (and individual) measurements (mm) of northern *E. difficilis* group. Measured personally (A.R.P.) or by previous revisers; immatures and a few badly worn or apparently mis-sexed specimens omitted. Wing is chord, presumably in all measurements except perhaps Brodkorb's, which should be compared inter se.

Region or locality and reviser	Wing	Tail
<b>Males</b>		
Southern Alaska (Ridgway)	67.5	56.5
Southern Alaska (Brodkorb)	67.2 (67-67.5)	56 (54-59)
Price Island., British Columbia (not <i>E. flaviventris</i> as in AOU [1957], A.R.P.)	(69.1)	(61.8)
Fort Steilacoom, Washington (type of <i>difficilis</i> , Bremen Museum; A.R.P.)	(67)	(59)
West Coast generally (Brodkorb)	67.1 (63-70)	56.6 (51.5-60.5)
California mainland (Brodkorb)	66.6 (63-69.5)	56.75 (51.5-60)
California mainland (Ridgway)	65	55.1
<i>E. d. difficilis</i> in general (A.R.P.)	66 ± (63-68.6)	57 ± (54-60.7)
<i>E. d. insulicola</i> (A.R.P.)	68 ± (64.2 [+?], 65.5-70)	60 ± (57.3 [+?], 59-62.6)
<i>E. d. insulicola</i> (Ridgway)	67.3	57.6
<i>E. d. insulicola</i> (Brodkorb)	68 (64-69.5)	60 (58-62.5)
Northern U.S. Rocky Mts. (Brodkorb)	71.4 (69-73.5)	60.3 (57-62.5)
Black Hills (Brodkorb)	70.3 (68-72)	59.5 (57.5-62.5)
Rocky Mt. district (Ridgway)	69.5	58.8
Boxelder Co., Utah (Behle)	68.8 (65.4-73.7)	58 (57.2-59)
Salt Lake Co., Utah (Behle)	(70.7, 70.7)	(61.7, 62.5)
Southeastern Utah (Behle)	(73.4, 75.4)	(62.4, 64.4)
Northern Arizona (Brodkorb)	73.6 (71-76)	61.4 (58-63.5)
Southern Arizona, breeding (A.R.P.)	(69.9, 71)	(61.1, 62)
Texas (Brodkorb)	73.6 (69-75.5)	61.3 (60-65)
<b>Females</b>		
Southern Alaska (Ridgway)	(64)	(54.5)
West coast generally (Brodkorb)	62.3 (59-65.5)	54.5 (51.5-57.5)
<i>E. d. difficilis</i> in general (A.R.P.)	62 ± (59-65)	54.5 ± (51.5-57, rarely 58)
California mainland (Ridgway)	63.4	54.6
<i>E. d. insulicola</i> (A.R.P.)	(60-63.3)	(55.9-60.6)
Northern U.S. Rocky Mts. (Brodkorb)	(66, 67)	(55, 56)
Black Hills (Brodkorb)	(63)	(53.5)
Boxelder Co., Utah (Behle)	(63, 63.6)	(55.7, 57.3)
Salt Lake Co., Utah (Behle)	(65.7)	(63)
Southeastern Utah (Behle)	65.1 (63-66.7)	58.3 (57.4-59)
Arizona and New Mexico, breeding (Ridgway)	66	55.9
Northern Arizona, breeding (A.R.P.)	(65)	(59)
Northern Arizona (Brodkorb)	67.5 (67-68)	58.3 (57.5-59)
Texas (Brodkorb)	66.8 (64-69.5)	57.5 (55-62)

(5) *Voice*.—This is apparently less important for species recognition in swallows than in flycatchers; that of *S. ridgwayi* is apparently unrecorded.

The primary biological (external) character separating "*E. occidentalis*" is the (usual) squeaky "whee-sit" of *hellmayri* (as far as known) versus *difficilis*' squeaky "wee-tee'" or "pee-est'" call. However, no analysis of songs and mating is available from anywhere in the vast areas of morphological (size) intergradation (Behle 1948, Brodkorb 1949). The most distinctive song may prove to be the "liquid-sounding song" of *cineritius* (J. S. Rowley in Bent 1942:254).

(6) *Sympatry*.—*Stelgidopteryx ridgwayi* is (presumably) resident where races of *serripennis* (or, if lumped, *ruficollis*) also breed, from at least Veracruz and the Pacific slope of Oaxaca east to central Guatemala and

north to Belize (Phillips 1986). I have seen no hybrids. Claims of an approach (Monroe 1968:280) or intergradation (Bangs and Peters 1927:479) are evidently based on improper comparisons (as of fresh vs. foxed skins) and are denied in Phillips (1986:24-25).

Sympatry of the *occidentalis* group of *E. difficilis* with "*E. flavescens*" was claimed by Griscom, Miller, and Moore (in Miller et al. 1957:92-93). Monroe (1968:268), following Zimmer (1953), examined the Honduras "*difficilis*" and called them "worn examples of *E. flavescens*." While conceivably an occasional "*difficilis*" from the area of supposed overlap (Chiapas to Honduras) might be an excessively worn and faded adult, most if not all are really juvenals by my examination (Phillips 1960:362), while the brighter "*E. flavescens*" are the later plumages.

TABLE 2. Distributions (in percent) of discriminant scores of populations of *Empidonax* (from Johnson and Marten 1988:fig. 5).

Range of discriminant scores	Warner Mountains	Shasta	Siskiyou
<b>Males</b>			
-0.25 to 0.125	80	0	17.6
-0.25 to 0.35	100	0	41.2
0.125 to 0.8	20	18	64.7
0.35 to 0.75	0	0	35.3
0.75 to 1.1	0	100	17.6
0.8 to 1.1	0	81.8	11.8
<b>Females</b>			
-5.25 to -1.75	81.8	0	37.5
-5.25 to -0.75	100	0	50
-1.75 to 5.5	18	14.3	50
-0.75 to 4	0	0	25
4 to 9.75	0	100	25
5.5 to 9.75	0	85.7	12.5

The AOU's recognition of "*E. occidentalis*" rests primarily on the claim (Johnson and Marten 1988:177) that "*Empidonax d. difficilis* and *E. d. hellmayri* nest sympatrically and mate assortatively in the Siskiyou region. . . . Interbreeding has not been demonstrated conclusively, and we regard these taxa as biologic species." This in turn is based on a total of four mated pairs, primarily from a collection of "8 certain or probably *E. d. hellmayri* and 9 definite or probable *E. d. difficilis*." Although these races differ, physically, only in size, no useful measurements are given. One of the (Pacific) *difficilis* "had an 'interior' genotype (FM) at the 6-PGD locus" and "may have been of recent backcross origin," while two earlier specimens "identified as *E. d. difficilis* by the discriminant analysis" may also be hybrids (Johnson and Marten 1988:186).

Parenthetically, Johnson and Marten (1988) further remarked that *insulicola* was described as a species. They failed to note, however, that actual geographic intergradation was then (Oberholser 1897) often considered the key to the rank of subspecies. Even populations now universally agreed not to be valid subspecies were thus named as species: *Vireo mailliardorum* Grinnell 1903 (see Rea in Phillips 1991:185); *Carpodacus mutans* Grinnell 1911.

Johnson and Marten (1988) plotted their Siskiyou sample as a whole in most of their tables and figures, without individual measurements, despite their claim that it is a composite of two species. Finally, in the discriminant analysis (p. 187, fig. 5), they compared it individually to the nearby Shasta and Warner Mountains series—not to near-topotypes of either race. The smaller form, Shasta, has entirely positive discriminant scores; the larger ranges around 0 (male) or is entirely negative (female). Their figure 5 does not support Johnson and Marten's (1988) claim that it "showed clearly the sympatric character of the Sis-

kiyou population," which (p. 189) "maintain their integrity in local sympatry," being reproductively isolated. Instead, it shows no tendency to split into two separated centers, nor does it indicate which discriminant scores are from the mated pairs (see Table 2).

*Concluding remarks.*—For another peculiarity of AOU (1983), see the account of the world's most renowned migrant, the Arctic Tern (*Sterna paradisaea*)—reversing its Atlantic route, illustrated in various introductory textbooks and documented in many state bird lists, etc., and in AOU (1931) and especially AOU (1957).

The 20th century has seen a dramatic change from dedicated ornithologists, seeking new kinds and other knowledge—of nests, eggs, life histories, anatomy, paleontology, migrations—of whole, wild birds in general to a less demanding commercial, largely academic, competition governed by men who never heard of Linnaeus and make no pretense of knowing one bird or animal from another. Even with pertinent, trustworthy data, application of allozyme and other genetic differences to species' names would threaten the stability of our international nomenclature, since no such data were available when the animals were named. True conservatism is indeed warranted.

The future will tell which persons, committees, foundations, grants, and awards are presently "hard to take . . . seriously" (Banks 1991:1001)—though our authorities do so—and who labored, on their own time, to set forth avian biodiversity and, thus, make its conservation possible.

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## Old-school Taxonomy Versus Modern Biosystematics: Species-level Decisions in *Stelgidopteryx* and *Empidonax*

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The AOU Committee on Classification and Nomenclature (hereafter, "Check-list Committee" or "CLC") rejected Phillips' (1986) proposal of species status for "*Stelgidopteryx ridgwayi*," but accepted Johnson and Marten's (1988) conclusion that *Empidonax occidentalis* is a biologic species (AOU 1989). Phillips (1994) argued that the opposite decision was justified in each case. In this response I defend decisions of the Check-list Committee on both issues. I also present personal views on the function of the CLC, of which I am a member. My views do not necessarily coincide with those of other CLC members.

At the outset it should be emphasized that no two species-level problems in avian systematics are identical. Pairs of any taxa always differ in distribution, degree of interaction, patterns of morphologic vari-

ation, and ecologic requirements. The kinds and quality of available information pertinent to the solution of each problem also will differ from case to case. Furthermore, researchers, including members of the CLC, seldom agree precisely on the relative importance of different kinds of data, on methods of data evaluation, or on concepts of species and subspecies. Nothing prevents an individual investigator from holding any view he or she chooses for any particular group of birds. In decisions on taxonomic status, therefore, members of the CLC think and vote as individuals. For these reasons, decisions on the systematic status of different pairs of taxa rarely will be comparable.

Despite these complications, the CLC attempts to deliberate issues consistently and conservatively, thus