Conversion of Peter Pyle's Bird Identification Guide into Field Reference Tables

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ABSTRACT

The design of a field reference, using data extracted from Pyle's *Identification Guide to North American Birds: Part 1* (1997), is presented. A simple table format was employed to organize anatomical criteria vs age and plumage to facilitate delineating the age, sex, and species of a bird quickly and accurately.

INTRODUCTION

The implementation of Peter Pyle's *Identification Guide to North American Birds: Part 1* (1997) provides data for the comprehensive in-hand aging, sexing, and identification of birds. Using this guide in the field, however, can result in captured birds having to spend inordinate lengths of time being processed, which could be detrimental to the birds. The increased processing time results from the investigator having to dig through the species accounts to find the definitive criteria. Newstrom (1999) also reports that keeping track of what has been documented using Pyle's guide is frequently difficult and awkward, which he finds can result in having to repeat some of the processing.

Since implementing Pyle's guide as the primary banding reference, it has become increasingly apparent that the guide needed to be organized into a convenient, user-friendly format. Newstrom (1999) went beyond that need to generate an alternative guide using Pyle's data. Based on the Bird Banding Manual (CWS and USFWS 1977) format, he used Pyle's descriptions to create updated aging/sexing keys. This task was labor intensive, but he claims that the effort was simplified somewhat by using Microsoft Works™ 4.0 quiz software. Using this format, some of his keys required more than one page to present all of the options and the software did not allow inserting critical figures and tables into the worksheet. Therefore, his keys still require searching Pyle for this information.

We elected to take a different approach to simplifying Pyle's guide. Our primary objective was to generate single-page data sheets for the species that we encounter at the Featherbed Lane Banding Station in New Jersey (Suthers 1988; Suthers et al. 2000) that were easy to use and consult in the field.

METHODS

To accomplish our objective, we distilled Pyle's accounts to obtain the criteria that accurately delineate age, sex and species and then to organize these identifiers into simple tables using Microsoft Word2000™ software. When Pyle's data could not be abbreviated adequately, specific directions to consult Pyle's guide were listed. In addition, since we wanted the data sheets to be a useful resource for our less experienced volunteers, we listed a field reference that illustrated the target species. It also became apparent to us that including figures in the tables was paramount for delineating some characteristics and we resorted to drafting basic sketches that we incorporated into the tables.

To facilitate using the data sheets at the banding site, the species accounts were organized numerically by AOU species number. An alphabetical index of the birds (with AOU number) was also prepared to assist in finding a desired data sheet quickly.

Figure 1.

American Redstart [AMRE] AOU Species No. **6870**

Setophaga ruticilla **Band: 0A – 0**

References: Pyle, p. 496; Peterson (1980), p. 236; Dunn & Garrett (1977), p. 96, 418-427

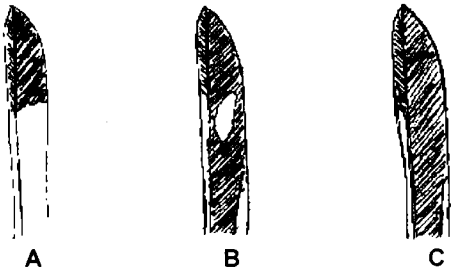
Identification	If required, see Dunn & Garrett or Peterson		
Sex	[**m**]: CP (May-Aug) Wing length: 58-69 mm; tail length: 49-58 mm [**f**]: BP (May-Aug) Wing length: 55-66 mm; tail length: 52-61 mm **Note:** Tail length measurements may not be correct in Pyle – need to be confirmed.		
Skull	HY: Pneumatization complete by 15-Oct through Dec		
Age	**Juv** (Jun-Sep)	**HY/SY** [m] (Sep-Aug) [f] (Aug-Jul)	**AHY/ASY** [m] (Sep-Aug) [f] (Aug-Jul)
Plumage: (Dimorphic)	Brownish upperparts; grayish underparts; 2 whitish/yellow wing bars.		[**m**] Flight feathers black and orange [**f**] Generally with no black
Upperparts/throat:		[**m**] No black (Aug-Apr) to some black mottling (Sep-Aug) [**f**] No black mottling	[**m**] Black (including throat) [**f**] No black mottling
Breast (sides):		[**m**] Patches on sides orangish-yellow to salmon contrasting with yellow underwings [**f**] Lemon-yellow to orange-yellow with no contrast with underwings	[**m**] Black [**f**] Side patches lemon-yellow with no contrast with underwings
Rump:		[**f**] Pale gray, same as back	
Outer pp covs:		Narrow, tapered, somewhat abraded; possible contrast with replaced greater covs	Broad, truncate, fresh; no contrast with greater covs
Rects:		[**m**] Abraded, washed brownish, yellow patch r3 extensive (**A,B**) [**f**] Abraded, washed brownish, yellow patch on r3 reduced, dusky or lacking (**B,C**)	[**f**] Fresh, dusky, yellow patch on r3 large (**A,B**)
	 **A** **B** **C**		
Notes:	1) May be possible to sex juv by amount of yellow in r3 (review HY/SY) 2) HY/SY (Aug-Mar) without black feathering of [m] should be sexed with caution. 3) Caution: Old [f] have been found with some black body feathers.		

Figure 2.

Scarlet Tanager [SCTA] AOU Species No. **6080**

Piranga olivacea **Band: 1B**

References: Pyle: p. 527; Peterson (1980): p. 260

Identification	Smallest tanager [wg: 86-101 mm] (If required, see Peterson for coloration/plumages/sex differences) Bill: Tip-nares length: 10.5-12.1 mm, horn-colored, and hooked Generally, no wing bars				
Skull	**HY/SY:** Pneumatization can be complete by Nov 1 **SY:** Windows possible until Sep 1				
Sex/Age	**Juv:** (Jun-Aug)	**Basic plumage:** (Aug-Mar)		**Alternate plumage:** (Mar-Sep) **[m] CP/ [f] BP** (May-Sep)	
		HY/SY	**AHY/ASY**	**SY**	**ASY**
Plumage: (Dimorphic)	Resembles duller basic plumage [f]; washed grayish; pale wing bars [m?]: Darker, grayish brown flight feathers. [f?]: Paler brown flight feathers	[m]: Moderately bright olive-green [f]: Dull/dusky olive	[m]: Brightish olive-green with breast/ rump sometimes tinged orange; underparts with some red feathers; primary flight feathers black [f]: Moderately bright yellowish-green	[m]: Body: Red/ mixed red-green [f]: Body: Yellowish-green/ no orange	[m]: Body: Red; Flight feathers: Black [f]: Body: Yellowish-green/ occasional orange-tinge
Head:		[m]: No blackish eyebrows	[m]: Blackish eyebrows possible	[m]: Red / mixed red-green [f]: Yellowish-green/no orange	[m]: Red [f]: Yellowish-green with occasional orange-tinge
Iris:	Grayish	Gray/gray-brown (through Nov)	Blackish-brown		
Outer covs:		[m]: Replaced covs black, contrasting with retained juv gr covs/pp covs/ flight feathers. [f]: Retained abraded/grayish-brown/yellow tips; contrasts with fresher, duskier, olive-edged replaced inner covs.	[m]: Uniformly adult; black covs. [f]: Uniformly adult; dusky with olive edging.	[m]: See HY/SY Basic plumage [f]: Retained covs juv (brown with abraded yellow tips) or first basic (brownish-dusky with dull green edging) contrasts with replaced inner covs.	
Outer pp covs:		Narrow, tapered, abraded, pale brown/dull green edging; can contrast with replaced gr covs.	Broad, truncate, fresh; dusky brown with green edging; no contrast with gr covs	Narrow, tapered, abraded; brown with little/no green edging	Broad, fresh, truncate, dusky, usually with greenish edging
Rects:		Outer r's tapered, abraded	Outer r's truncate and fresh	Fresh, dusky with possibly 1-9 brown r's retained	[m]: Blackish [f]: Uniformly brownish dusky; central r's may be fresher
Notes:	Caution: Some [f] may be difficult to age.				

RESULTS

Two species account tables are presented with this report: American Redstart (Figure 1), the species used by Newstrom to illustrate his report, and Scarlet Tanager (Figure 2), to show how the criteria for discriminating age and sex in both basic and alternate plumages can be tabulated. Although not presented, and as would be expected, data sheets for monomorphic species or species not having alternate plumages have proportionally fewer discriminative options listed.

DISCUSSION

Pyle has produced an identification guide for birds that will be the standard for many years. However, this guide is relatively cumbersome to use in the field, and it may be that it will achieve its ultimate value as a study guide in preparation for field studies. Newstrom (1999) has designed an alternative aging/sexing key based on Pyle's data, and we are presenting another option for organizing his data in this note. It is difficult to compare the relative appropriateness of the two formats because each was created to fit the specific objectives of its designers. It is assumed that the questionnaire format used by Newstrom can expedite the processing of birds relative to the length of time required to achieve the equivalent results using Pyle's guide. However, using these questionnaires requires keeping a "score" and then deciding the age and sex on a final tally; this could result in ambiguities, as pointed out by Newstrom, that would have to be resolved by additional processing.

We elected to simply extract the definitive data from Pyle and to organize them in tables. We have found that when the discrimination options are listed in this format, the bander can quickly key in on the anatomical/plumage features that are critical for determining the age and sex of the subject bird. This is possible because the criteria are arranged in rows for each discriminative factor and in columns for each age group and plumage. Therefore, this format also prompts the investigator to evaluate the other factors listed for confirmation of an age or sex assignment and/or to resolve conflicting observations readily. For discriminating between similar species, the first row in a species account provides the parameters that must be met for a positive identification.

The end result has been that the birds we process using our tables are now being subjected to a significantly shorter length of time compared to the interval that had been required when we had to extract the same data directly from Pyle's guide. In addition, tabulating the discriminative criteria has shown us that there is still much to be determined regarding the aging and sexing of some species and is identifying new research objectives for our banding station.

Finally, the subject of what is the best design for a field reference guide can always be debated. Currently, Pyle's guide is the mandated standard. However, his guide is not easy to use in the field and therefore, we modified it to meet our needs. Based on our experience, it is suggested that others should review their field reference needs; and if they are finding that using Pyle's guide is increasing the time required to process a bird, as we found, then we recommend that they create their own field reference source.

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