Notes on the Identification of Selasphorus and Archilochus Hummingbirds

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With the recent documentation of vagrant hummingbirds in the East (Conway and Drennan, 1979), hummingbird-watching has taken on a new flair; no longer should we be content to think only in terms of Ruby-throateds when afield. No less than five western species have been reliably reported east of the Mississippi River: Rufous, Allen's (!), Broad-tailed, Buff-bellied, and Black-chinned. Two of these have occurred in Massachusetts: Rufous (mid-April, 1978; Am.Birds: 32: 1139) and Black-chinned (late November-early December, 1979; B.O.E.M. 8: 33-34). Note that the record quoted by Conway and Drennan of Buff-bellied Hummingbird in Massachusetts has been rescinded (Am.Birds 33: 322).

As tantalizing as all this is, the realities of hummingbird identification are (1) that not all birds are adult males and (2) that many individuals will get by without even being assigned to genus. How many times have we seen, however poorly, a hummingbird zip past and have automatically called it a Ruby-throated? And, similarly, I have to believe that out of all the non-adult male Rufous Hummingbird records listed by Conway and Drennan, at least one of them would have proved to be an Allen's or a Broad-tailed if identified in the hand.

In this paper I wish to increase awareness of the differences between some closely related species so that future documentation can be made easier and more complete. Two generally available publications, Stiles (1971) and Phillips, Marshall, and Monson (1964), continue where field guides stop and are highly recommended for determining species in the field and/or in the hand.

When to Look:

Generally speaking, fall is the most productive--the flowers linger and so do the birds. Feeder-watchers in the far south may claim winter as the vagrant season; however, this almost surely results when birds that arrive in the area weeks earlier are forced to feeders by weather and lack of food. It must be pointed out that several western hummingbirds, e.g., Allen's, Costa's, and Rufous, migrate very early so that birds are already moving southward during the summer (Phillips, 1975; Sorrie, MS). This is particularly true of adult males, which take no active part in rearing of the young. In California, for example, adult male Rufous arrive in the Sierran meadows as early as late June, peaking in July (Sorrie, MS). It is perhaps noteworthy that the records of Rufous for Nova Scotia, Maine, and New Hampshire all occur during the summer (Conway and Drennan, op. cit.). Spring records, at least those prior to May, will be hard to find in New England due to the lack of appropriate flowers.

Identification:

Adult males present no field problem if seen well, but females and immatures are very difficult to separate into species, given present knowledge. In the hand, however, identification is straightforward and not particularly difficult, as well as being much more reliable. Therefore, unless the bird in question is found dead, every effort should be made to have a licensed bander capture it for measurements and photographs. Two

critical tail feathers (Selasphorus) or one inner primary (Archilochus) must be pulled and saved with the mensural data as a voucher. Measurements should include wing length, tail length, and length of exposed culmen. Good photographs of birds at feeders, etc., are an immense help when capture is impossible.

(A) Selasphorus. Fully adult males present no problems. The Rufous Hummingbird (S. rufus) has a wholly rufous back although there may be some scattered green feathers; Allen's (S. sasin) is wholly green. Both species show rufous extensively on the rump and upper tail coverts. In flight both species produce a somewhat metallic buzzy sound with their wings--not a low hum as made by most other hummingbirds and female Selasphorus but a buzz.

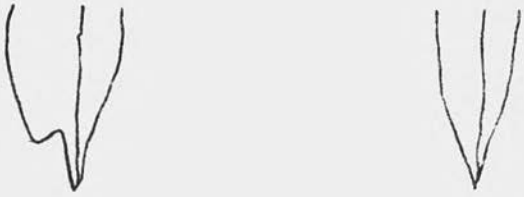
In the hand, rectrix #2 (next to the central tail feather) of S. rufus shows a distinct notch or cut-out on the inner web near the tip plus a sinuate margin on the outer web. Rectrix #2 of S. sasin shows only a sinuate margin on the inner web or none at all (fig. 1).

Caution: I have seen at least ten specimens of S. rufus out of hundreds of museum skins plus one live bird in the hand whose backs were two-thirds to wholly green These breeding-season males all showed the characteristic notching to rectrix #2. Some of these may have been males in their first breeding season which did not molt new adult back feathers. The possibility of hybridization between such closely related species should not be dismissed although it has not been described in the literature. The 1978 Massachusetts' Rufous Hummingbird had molted about fifty percent of the back and required close scrutiny of the photos to be sure of the species.

Females and immatures of both sexes are at present not reliably separable in the field as to species; they simply should be called "Selasphorus sp." In the hand, rectrices of S. rufus are wider, feather for feather, than those of S. sasin. Once sex and age have been determined (the key in Stiles, 1972, is adequate), rectrices #2 and #5 must be plucked from one side, measured, and saved. I suggest saving #2 rather than #1 because there is less variation in width than in #1 and because it, too, can be used to determine sex. Except for a limited amount of overlap in immature females, there is essentially no overlap in the width of rectrix #5, nor #2, for any age/sex class (Sorrie, MS).

A word should be said about the Broad-tailed Hummingbird, S. platycercus, a species no less likely here than the Allen's Hummingbird. It is decidedly larger than either S. rufus or S. sasin. Adult males have a magenta or rose-red gorget, not red (Ruby-throated) nor coppery-red (Allen's and Rufous), and make a shrill, buzzy wing noise when flying, louder and more metallic in quality than the other two Selasphorus species. In all ages and sexes, the Broad-tailed has less rufous on the underparts and tail than the others, but this requires careful observation in the field. In the hand, the longer wing and the enormously broad and long tail feathers will easily separate it from the others (see illustration in Stiles, 1971).

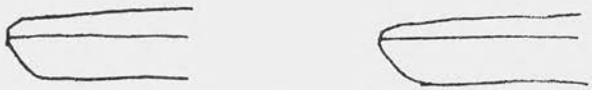
(B) Archilochus. There should be no problem assigning members of Archilochus and Selasphorus to the correct genus. Adult males and some pale-flanked female and immature Broad-tailed Hummingbirds may approach



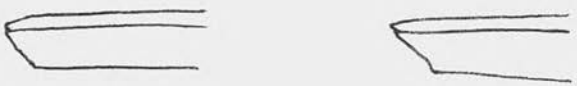
Rufous
(S. rufus)

Allen's
(S. sasin)

Figure 1. Shape of right rectrix #2 in Rufous and Allen's Hummingbirds.



Black-chinned
(A. alexandri)



Ruby-throated
(A. colubris)

Figure 2. Shape of left primary #6 in Black-chinned and Ruby-throated Hummingbirds, showing variation.

in resemblance various ages and sexes of the two Archilochus, but the latter are distinguished by the distinctly shortened central tail feathers only slightly, or not at all, shorter in Selasphorus. This may be useful in the field, but a better mark for adult male Broad-taileds is the wing noise. Females and immature males will show orange basally on the lateral tail feathers.

Adult male Archilochus are adequately pictured in field guides especially Peterson's A Field Guide to Western Birds. As Peterson cautions, be sure to see the violet gorget band when identifying a Black-chinned.

Females and immatures are at present not reliably separable to species in the field. In the hand, there is apparently no overlap in the culmen length of immature males and little overlap in females, A. alexandri being longer; this is probably the best distinguishing mark. The shape of the tips of the inner primaries, #1 to #6, is also diagnostic as shown by Phillips (1975). In A. alexandri the tips are bluntly pointed with a relatively narrow outer web (Fig. 2). This fact was discovered independently by the writer while researching identification criteria for the 1979 Massachusetts specimen of the Black-chinned Hummingbird. It is applicable to both sexes.

Female and immature Costa's Hummingbirds (Calypte costae) look very much like Archilochus but are a paler sandy green above and almost pure white below. Stiles (1971) offers several good points of separation.

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