

Tattletails:

How to Sex and Age Purple Martins Using Their Undertail Coverts

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Purple Martins are unique in that they exhibit both *delayed-plumage maturation* (they take two years to acquire their adult plumage) and they also have *sexual dichromatism* (males and females have plumages that are different from each other in color). As a result, there are four recognizable sex/age classes or plumages among breeders, and a fifth when you add the unique plumage of fledglings. The purpose of this photo guide is to help landlords better distinguish among all the numerous martin plumages using just the birds' undertail coverts, also known as the "crissum," which is the large,

triangular area of feathers under the martin's tail. Sexing and aging breeding Purple Martins can be a real challenge for newer landlords, particularly those without binoculars or a spotting scope. Proper identification is especially important for landlords that are participating in Project MartinWatch, one of the *Purple Martin Conservation Association's (PMCA's)* ongoing, citizen science, research projects.

The Purple Martins in these photos were all captured alive during the *PMCA's* ongoing diet studies and were released unharmed after being photographed. The fledgling was

hand captured as a *kleptoparasite*, a fledgling that returns to the wrong active cavity (not its natal cavity) and parasitizes feedings from non-parental adults, often to the detriment of the nestlings in that cavity, who are often younger/smaller.

ASY-M (after second year male = adult male, 2 years old or older): This is the easiest of the four breeding plumages to recognize. The crissum of adult males is usually a solid purple, or a solid purple fringed with tan edging (as in this photo). There is no mistaking the sex/age category of an adult male.

ASY-F (after second year female = adult female, 2 years old or older): The crissum of adult females is quite variable. Most adult female martins have a crissum like this individual, with lots of rich brown coloring on the feather vanes themselves. A few adult females have a crissum with only faint brown feather vanes. When aging 'difficult' females based on crissum color, it's best to use the bird's entire plumage (including the bird's back color).

SY-M (second year male = subadult male, 1 year old): The crissum of subadult males is quite variable in the amount of purple feathering they show. Some birds have several purple feathers, others have very few. Note the purple and dark gray colors on the crissum of this typical subadult male as compared to the browns in the crissums of both the adult female and subadult female.

SY-F (second year female = subadult female, 1 year old): Like the crissum of subadult males, the crissum of subadult females is highly variable. We show two examples here. The crissum can be pure white (right SY-F photo), or with just the feather shaft (quill) chocolate colored (left SY-F photo). If you see a female with either of these two crissum patterns, it's clearly a bird that fits into the subadult female sex/age category.

AHY-F (after hatching year female = age unknown (SY? or ASY?), ≥ 1 year old): Not shown. Females that can't be aged accurately by plumage are put into this category. Some females have crissums that are intermediate between the adult female and subadult females shown here. In these cases, use the entire plumage (including the back color) to determine the age category of the bird. Adult females are purple on back, subadult females are brownish. Use caution, however, because the sun bleaches out the back color of female martins from purplish to brownish by late summer. When in doubt about a female's age, use the code AHY-F.

HY-U (hatching year, sex unknown = fledgling, ~ 30 to 45 days old): The fifth distinctive plumage that landlords will encounter at season's end is that of fledglings. Their crissums are similar in color to SY-F's, but their tails are much shorter and are still growing in length. The bird in this photo is about 30 days old.



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ASY-M
adult male



ASY-F
adult female



SY-M
subadult male



SY-F
subadult female



SY-F
subadult female



HY-U
hatching year (fledgling)
sex unknown

