

DESCRIPTIONS OF NEWLY-HATCHED PASSERINE BIRDS

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For a good many years I have collected descriptions of newly-hatched passerine birds, whenever the opportunity came. These descriptions are from living young in the nest. Comparatively little has been published on this subject.

When I first began this work I did not know just what to look for, and consequently my earlier notes are of little value. I have not been able to get descriptions of all of the common breeding species of any one region, for the opportunity to see young in the very early stages does not always come just when one wants it to.

Points which should be observed and described are the color of the skin, the color of the mouth lining and of the external edges of the bill, and the color and distribution of natal down in the feather tracts. Size and weight are undoubtedly important, but they require a special field apparatus and a definite knowledge of the exact age of the bird to make them of value.

The arrangement of natal down by feather tracts is evidently a character of some value in taxonomy. Boulton (1927, p. 387) says, "Variations in the distribution of natal down in the young of passerine birds are endless and while this field has not been thoroughly worked, it may eventually prove valuable in the determination of the relationships and dividing lines between genera and families."

A general description of a young passerine bird would be about as follows. The skin is flesh color in most species, and looks dull bluish about the eyes, and on the joints of the wings where the flight feathers will appear later. The swollen edges of the base of the bill are commonly cream color or light yellow. The lining of the mouth is either pink or yellow, varying to dull reddish, or raw-meat color in some species, and from pale to very rich yellow in others. Natal down varies in color from white through various shades of gray to nearly black. Except in those species that have no natal down it occurs mainly on the head and back. In many species it occurs in other feather tracts as well, but mainly those on the upper surface.

A young Chipping Sparrow (*Spizella passerina*) has all but one of the feather tracts that I have noted in passerine birds. I have therefore used this species to illustrate the feather tracts where down occurs, the figure being from one of my field sketches. Feather tracts have been discussed and figured in several publications. Dwight (1900, plate III) has illustrated these tracts. In the matter of nomenclature, however, I am following Boulton (1927) because he goes into greater detail about the particular tracts where natal down occurs.

Natal down does not occur in all parts of the feather tracts but, in the species I have observed, only in certain parts of the tracts, but sometimes in more than one place in a feather tract, so that I have referred to these places as down patches. These down patches require names, that future workers on this subject may have a standard to follow.

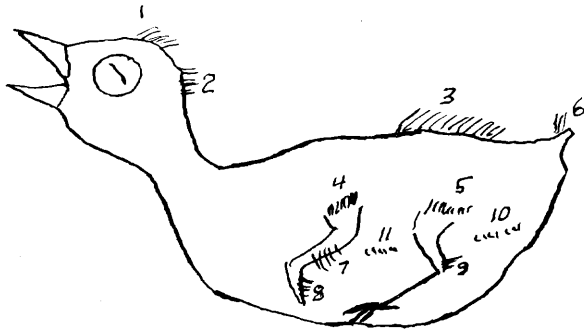


Fig. 1. A newly-hatched Chipping Sparrow showing down-patches in the feather tracts.

Down Patches

1. coronal	} capital tract
2. occipital	
3. dorsal	
4. humeral	
5. femoral	
6. caudal	
7. secondary	} alar tract
8. primary	
9. crural	
10. abdominal	} abdominal tract
11. lateral	

In the capital tract down may occur in three different patches, ocular, coronal and occipital. The ocular tract, the down actually on the eyelids, occurs in my experience, only in the Phoebe (*Sayornis phoebe*). Since that bird is the only flycatcher I have examined, I am inclined to believe that this down patch is a character of clamatorine birds; and will not be found in oscines. The other two patches of the capital tract occur in all the species that I have examined except those that have no down at all.

The dorsal tract also occurs in all of the species that I have seen and that have any natal down at all. It occurs in different parts of the tract; in some species over the entire length of the back, in others on the rear half, and in still others only in the middle of the back. Boulton (1927 p. 400) found natal down only on the capital and dorsal tracts of the House Wren (*Troglodytes aedon*). In my experience this is also true of the Long-billed Marsh Wren (*Telmatodytes palustris*). One might assume that this is a character of the wren family, for all other species I have examined that have natal down, have it in more than just these two feather tracts.

Other down patches are one on the shoulder (humeral); one on the thigh (femoral); a tuft of down on the tail (caudal), two patches on the alar tract, one on the primary joint and the other the secondary; a tuft of down on the crural tract, just back of the heel joint; and two

patches on the abdominal tract, one at the rear end of that tract, on the lower side, the abdominal patch; and one on the lower side between the legs and wings, the lateral patch.

Detailed descriptions of the species I have examined follow.

Eastern Phoebe (*Sayornis phoebe*)

The skin is normal flesh color. Both the edges of the bill and the mouth lining are yellow. The down is rather dark gray, longer than in oscine species, and occurs in all the capital patches; the ocular (on the eyelids), the coronal and occipital patches; on the greater part of the dorsal tract, on the humeral and femoral tracts, the secondaries, and small tufts on the caudal and crural tracts, and the abdominal patch. It is lacking only on the primaries and the lateral patch. The down is so long that when a young bird is crouching in the nest, the entire upper parts are well covered with down.

Barn Swallow (*Hirundo rustica*)

The skin is normal flesh color. The edges of the bill very pale yellow. The mouth lining is pale yellow. The down is light gray, very short, and pilose in appearance. Down occurs in coronal and occipital patches, the dorsal patch, in the middle of the back only, and the humeral and femoral patches. The down on the back is so short one may see that it occurs in two rows on either side of the spinal ridge. The rows seem to join at each end, so that the down seems to be in a long, very narrow oval, that is pointed at each end.

Blue Jay (*Cyanocitta cristata*)

My experience with this species was so long ago that I have no description of all of the details. All that I have that is definite is that the young are hatched without any natal down, whatsoever.

Magpie (*Pica pica*)

In days of Montana experiences I noted that young magpies were entirely lacking natal down. I have no further description.

Crow (*Corvus brachyrhynchos*)

There seems to be some difference between my experiences with this species and that of others. When I examined young birds, both in Montana, and later in Connecticut; both on the day of hatching, I found no down whatsoever. Others however state that the young crow has brown down. I am of the opinion that down is not present on the day of hatching, but that it grows out a short time later. On the other hand I may be wrong. Brown down may be harder to see, and an observer, balancing rather precariously in the top of a tree, might not make quite so accurate observations.

Long-billed Marsh Wren (*Telmatodytes palustris*)

My descriptions of this species are from birds several days old. The skin is normal flesh color. The outside of the mouth is yellow, and the inside lining deep yellow. The down is nearly white and I think it may be entirely so when a bird is newly-hatched. It occurs on the head in both coronal and occipital patches, and on the back, but not elsewhere.

Catbird (*Dumetella carolinensis*)

The skin of a young catbird is dark, blackish gray above and flesh color below. It is the darkest skinned of any young passerine bird I have seen. The mouth edges are blackish, but the mouth lining brilliant, rich yellow. The down is so dark gray that it is nearly black. It occurs on the head, in both patches, the entire length of the back, on the humeral, femoral and caudal patches, and on the secondary joint of the wing. The legs are light, yellowish flesh color.

Brown Thrasher (*Toxostoma rufum*)

The skin is dark flesh color above and lighter underneath. The mouth linings are yellow. Down is dark gray, occurring in the capital, dorsal, humeral, femoral, caudal and secondary patches. Dorsal down extends the entire length of the back. Young thrashers and catbirds are very much alike, and only the darker skin of the catbird will distinguish them, though if birds of both species were weighed or otherwise measured when exactly the same age, there would probably be a difference.

Robin (*Turdus migratorius*)

The skin is rather pale flesh color. The down is white when newly hatched, but becomes creamy color in a day or two, and is definitely gray before birds leave the nest. The mouth lining is rich yellow and the outside of the bill pale yellow. Down occurs on the capital, dorsal, humeral, and secondary tracts. On the back it covers the entire length.

Wood Thrush (*Hylocichla mustelina*)

The skin is flesh color. The mouth lining rich yellow, and the outside edges of the bill cream color. The down is dark gray occurring in the capital, dorsal and humeral tracts. In the dorsal tract it occurs on the rear half of the back only.

Hermit Thrush (*Hylocichla guttata*)

The skin is dark flesh color, inclined to brick-red. Mouth edges are cream color and the mouth lining rich yellow. The down is dark gray, on the capital, dorsal and humeral tracts, and only on the lower half of the back in the dorsal tract. Both in the Adirondacks and the Alleghany State Park I found numbers of nests of this species, and have written descriptions of the young at least a dozen times. The descriptions all tally except in color of the skin, which seems to be somewhat variable in individuals, darker in some nests and a little lighter in others. The only difference I can make out between young of this species and the Wood Thrush is this matter of skin color. This is a rather indefinite difference, and may prove to be none at all, for I have not examined many young Wood Thrushes.

Bluebird (*Sialia sialis*)

The skin is normal flesh color. The edges of the mouth are pale yellow and the mouth lining deep yellow. The down is dark gray on the capital, dorsal and humeral tracts, the dorsal being on the lower half of the back.

Cedar Waxwing (*Bombycilla cedrorum*)

The skin is grayish flesh color. The mouth lining is red, or raw meat color. There are two narrow lines inside the bill on either side that are light violet-blue. These lines are tapered to a point on either end, and when the mouth is opened look like a pair of parentheses. There is no natal down. I have studied the development of the feathers from time of hatching till they leave the nest (*Auk* **28**: 327-8) and there is no growth of down later.

Red-eyed Vireo (*Vireo olivaceus*)

The skin is yellowish-flesh color. The bill is pale cream color on the edges and the mouth lining pale yellow. The down is light gray, occurring on both capital patches, the lower half of the dorsal tract, the humeral, femoral, secondary, caudal, and crural tracts, and the abdominal patch of the abdominal tract.

Black and White Warbler (*Mniotilta varia*)

The skin inclines to rosy pink color. The bill is pale yellow on the outside, and the mouth lining pink. The down is dark gray on the capital, lower dorsal, humeral and femoral tracts.

Blue-winged Warbler (*Vermivora pinus*)

The skin is normal flesh color. The mouth has cream-colored edges and the lining is pink. The down is thin and gray, occurring on the capital, humeral and dorsal tracts. The down on the dorsal tract is not extensive, and only in the middle of the back.

Yellow Warbler (*Dendroica petechia*)

The skin is yellowish flesh color. Edges of the bill are pale yellow and the mouth lining pink. Down is light creamy color, occurring on the capital, dorsal, humeral, femoral, secondary and crural tracts.

Black-throated Blue Warbler (*Dendroica caerulescens*)

The skin is yellowish flesh color. The mouth is pale yellow on the outside and the lining pink. The down is dark gray, on the capital, dorsal, humeral, femoral and secondary tracts. On the dorsal tract the down is in the middle of the back only and the patch very small.

Chestnut-sided Warbler (*Dendroica pennsylvanica*)

The skin is yellowish flesh color. The edges of the mouth are pale cream color and the mouth lining pink. The down is dark gray and very sparse, occurring on the capital, dorsal, humeral and femoral tracts. The dorsal down is confined to a few wisps in the middle of the back, and in one individual I found no down on the back whatever.

Ovenbird (*Seiurus aurocapillus*)

The skin is normal flesh color. The mouth is pale yellow on the outside and the mouth lining pink. The down is medium gray, and occurs on the capital, dorsal, humeral, femoral and secondary tracts. On the back it occurs on the lower half.

Yellowthroat (*Geothlypis trichas*)

The skin is orange flesh-color. The mouth parts are pale yellow on the outside and deep reddish pink in the lining. Down is dark gray

on the capital, dorsal and humeral tracts. The dorsal down is confined to the lower half of the back.

Yellow-breasted Chat (*Icteria virens*)

The skin is dull orange yellow. My notes say "like the color of the yellow-fringed orchis." Outside of the mouth cream color. Lining of the mouth dull pink. Down none. I have studied development of the young and acquirement of feathers, and there is no acquirement of down at any time. The feathers begin to come through on all the tracts at once, on the third day after hatching.

Canada Warbler (*Wilsonia canadensis*)

Skin yellowish flesh-color. Mouth pale yellow on outside edges and lining yellow. Down medium gray on capital, dorsal, humeral, femoral and secondary tracts. This is the only warbler with mouth lining yellow. I have desired to find another nest and verify the point.

English Sparrow (*Passer domesticus*)

Skin flesh color. Mouth pale yellow outside, with pink lining. Down none. Having examined older birds with feathers coming through I believe there is no down at any time when acquiring plumage.

Red-wing (*Agelaius phoeniceus*)

Skin deep salmon-pink. Mouth cream-color on the edges, and pink in the lining. Down white, on the capital, dorsal, humeral, femoral, secondary, crural and lateral patches. After several days the down remains white. The dorsal down is on the lower half of the back.

Cowbird (*Molothrus ater*)

The skin is flesh color. Bill cream color outside and pink in the mouth lining. The down is gray, on the capital, dorsal, humeral, femoral, secondary, caudal, crural and abdominal patches. The bird I examined was in the nest of a Red-eyed Vireo, and the down patches were so similar to those of that species, that I found that the only way to distinguish which was the Cowbird, was by the mouth lining color. I later, however, noted a greater heaviness of the bill in the young Cowbird.

Indigo Bunting (*Passerina cyanea*)

The skin is flesh color. The bill is pale yellow on the outside. The mouth-lining is deep pink. The down is light gray, occurring in the capital, dorsal, humeral, femoral and secondary tracts. The dorsal tract covers the entire lower back.

Red-eyed Towhee (*Pipilo erythrophthalmus*)

The skin is flesh color. The mouth is edged with pale yellow, and the mouth lining is pink. The down is medium gray, occurring on the capital, dorsal, humeral, femoral and secondary tracts.

Vesper Sparrow (*Pooecetes gramineus*)

The skin is flesh color. The edges of the mouth are white. The mouth lining is deep pink. Down is gray, occurring on the capital, dorsal, humeral, femoral, secondary and caudal tracts.

Slate-colored Junco (*Junco hyemalis*)

The skin is flesh color. The mouth has pale yellow edges, and the mouth lining is deep pink. The down is dark gray, occurring on the capital, dorsal, humeral, femoral, secondary and lateral tracts. The down on the lateral tracts is lighter in color and shorter than other down. When birds are several days old, white down appears on the caudal tract, evidently preceding the appearance of the rectrices. Like the Hermit Thrush, my observations on this species are many for I found many nests in the Adirondacks, and in the Allegany State Park.

Chipping Sparrow (*Spizella passerina*)

The skin is dark brick color. The edges of the bill are cream color, and mouth lining is deep pink. The down is dark gray and occurs on all of the patches that I have observed in oscine birds; the capital, dorsal, humeral, femoral, secondaries, primaries, crural, caudal, abdominal and lateral patches.

Field Sparrow (*Spizella pusilla*)

The skin is pale flesh color. Edges of the bill are pale yellow, and the mouth lining is deep pink. Down is gray, occurring on the capital, dorsal, humeral, secondary, femoral, caudal and lateral tracts.

Song Sparrow (*Melospiza melodia*)

The skin is somewhat yellowish flesh color. The mouth edges are bright yellow and the mouth lining deep pink. I wrote in my notes that the color contrast reminded me of the flowers of the pink *Corydalis*. The down is dark gray, occurring in the capital, dorsal, humeral and femoral tracts, and only on the lower part of the back.

From my earlier notes I find a few things of some value, but my knowledge of down patches at that time was incomplete, and there is some confusion as to just which patches my notes refer to.

The Rough-winged Swallow, *Stelgidopteryx ruficollis*, is stated to have white down in similar patches to those of the Barn Swallow, but the femoral patch is not mentioned.

The Rose-breasted Grosbeak, *Pheucticus ludovicianus*, is stated to have white down, occurring in eight patches, but there is confusion as to which patches are meant.

In notes on the Veery, *Hylocichla fuscescens*, there seem to be more down patches than are found in the other thrushes of its genus, but which they are is not clear.

CONCLUSIONS

Some of the characters observed in describing newly-hatched young have taxonomic value. In general, colors have no more value than colors of feathers do in classifying species. The color of mouth lining follows somewhat after the order of families in our present check-list, for in all species examined in families from flycatchers to vireos, except the waxwings, the color is yellow; whereas in all families from warblers to sparrows, with the exception of the Canada Warbler, it is pink or reddish.

The arrangement of down patches shows similarities between members of the same family or genus. Any great difference between members of the same family, such as is the case of the Yellow-breasted Chat, should call for a careful study and possible readjustment of classification.

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GENERAL NOTES

Unstable Migratory Behavior in a Mockingbird.—A female Mockingbird (*Mimus polyglottos*) that I color-banded in Baltimore stayed continuously in her nesting territory for three summers and the two intervening winters, but then migrated the third winter, returning the following spring. Nice (1937. *Trans. Linn. Soc. N. Y.*, **6**: 33) has reported similar behavior by some Song Sparrows (*Melospiza melodia*) of both sexes.

My Mockingbird was color-banded April 20, 1952, was present through October 10, 1954, then disappeared—during her absence I several times saw an unbanded Mockingbird in the heart of her territory—and was next identified April 15, 1955, although a bird that I glimpsed with her mate on March 15 presumably was she. She was still present in late May of 1955, when my observations in her part of the city ceased.

That bird's mate, color-banded in 1953, was a summer resident; I saw him: 1953, April 1 (banded) to September 26; 1954, March 27 to October 17; 1955, March 11 to May 26 (when observations ended).

Of 23 other Mockingbirds that I have color-banded, only 5 have yielded clear records more than one season in length. Two males were permanent residents for 16 and 22 months after being banded, another male was a winter resident for 4 successive seasons, a bird of unknown sex was a spring migrant in 2 years, and an apparent female was either a winter resident or a spring migrant for 2 years.

The 18 others were divided: spring migrants, 2 males (that is, singers), 3 apparent females, 2 of unknown sex; winter residents, 2 males, 4 unknown; summer resident, 1 nesting female; fall migrant, 1 of unknown sex; status uncertain, 2 males, 1 female.—Hervey Brackbill, 2620 Poplar Drive, Baltimore 7, Maryland.

Extreme Old Age in Birds.—In *Bird-Banding*, **27**: 86, Bender refers to an Oystercatcher, *Haematopus o. ostralegus*, attaining the age of 27 years in the wild. Since the oldest bird reliably recorded in the wild was thought to be an Arctic Tern, *Sterna paradisica*, that also attained the age of 27 (*Bird-Banding*, **23**: 72-73), a further word may be of interest. The Oystercatcher had been banded as a chick in the nesting colony on the island of Mellum on June 12, 1926, and was recorded during six seasons before it was found nesting there in 1953. The original band had been replaced. (*Die Vogelwarte*, **17**: 43, January, 1954, note by Bernt Linzen). While the last day on which the bird was seen in 1953 is not stated, it is probable that this bird showed a life span at least a few days or weeks longer than the Arctic Tern referred to above, as the tern was found dead beside its nest.

In England a Common Tern, *Sterna hirundo*, was banded as a chick in Lancashire on June 29, 1929 and found dead at its nest, about 15 miles N.W. of its birthplace, on June 13, 1954 (*British Birds*, **48**: 486; referred to by Mrs. Nice in Review No. 3 in this issue). This is the oldest bird so far recorded by the British ringing scheme and the oldest Common Tern recorded anywhere. The band (presumably the original one) was fully legible.

[After this issue was in proof, I note in *The Ring* for February, 1956, p. 116, a Herring Gull (*Larus argentatus*) banded in Denmark on July 18, 1925 as a