

## WASHED BIRDSKINS

BY GEORGE MIKSCH SUTTON AND WILLIAM MONTAGNA

ANYONE who has collected birds extensively in southwestern Pennsylvania or in the northern Panhandle of West Virginia knows only too well how badly soiled a bird may become. A Pittsburgh Hairy Woodpecker may become so black in winter that its wings lose their spots. The underparts of Carolina Chickadees in the Wheeling region may become so dirty that the breast and belly are as dark as the throat-patch. Nearly every Pittsburgh winter specimen of Downy Woodpecker in the Carnegie Museum's large series of that species is so soiled that it can instantly be picked out as a "Pittsburgh bird." Such specimens may be acceptable enough for certain studies. They can be measured. But what place have they in a taxonomic series where painstaking color comparisons must be made?

A few years ago the senior author made a special study of the Chickadees of the northern Panhandle of West Virginia. Believing the flanks of the Carolina Chickadee to be less bright than those of the Black-cap, and the edgings of the secondaries less strikingly white, he proceeded with his investigations, finding to his surprise and disappointment that, basing his decisions upon flank-color and distinctness of white wing-edging alone, he could not identify his birds. He learned in time that a four-syllabled "phoebe" call-note was characteristic of *Parus carolinensis*, while a two-syllabled call-note was characteristic of the other; that the tail of *carolinensis* was short in appearance, even in the field; that the "dees" of the *chick-a-dee-dee-dee-dee* cry were apt to be more rapidly given in *carolinensis* than in *atricapillus*; but he utterly failed to find color differences that were constant and satisfying. In desperation he began *washing* thoroughly (in soap and water) all specimens collected, in the hope of finding what their true colors were. Eventually he amassed a considerable series of perfectly clean birds and found, again to his surprise, that the flank color in his winter Carolina Chickadees was nearly if not quite as bright as in the Black-caps, and that the white edging of the secondaries was equally distinct in the two forms.

This discovery led him to wash a series of *carolinensis* specimens collected near Thomasville, Georgia. The laundered Georgia birds, compared with laundered West Virginia birds, were distinctly *gray-winged*. *Parus carolinensis extimus* Todd and Sutton was straightway named as a new subspecies, with Bethany, Brooke County, West Virginia, as the type locality. The color characteristics of *P. c. extimus* were described as being very close to those of average *P. a. atricapillus*. And this was *known* to be the case, for most of the specimens used in making the comparisons had been thoroughly washed.

This Chickadee study led the senior author to investigate further the condition of material with which he was working. So confused was he by the dirtiness of most of the specimens collected along the Ohio

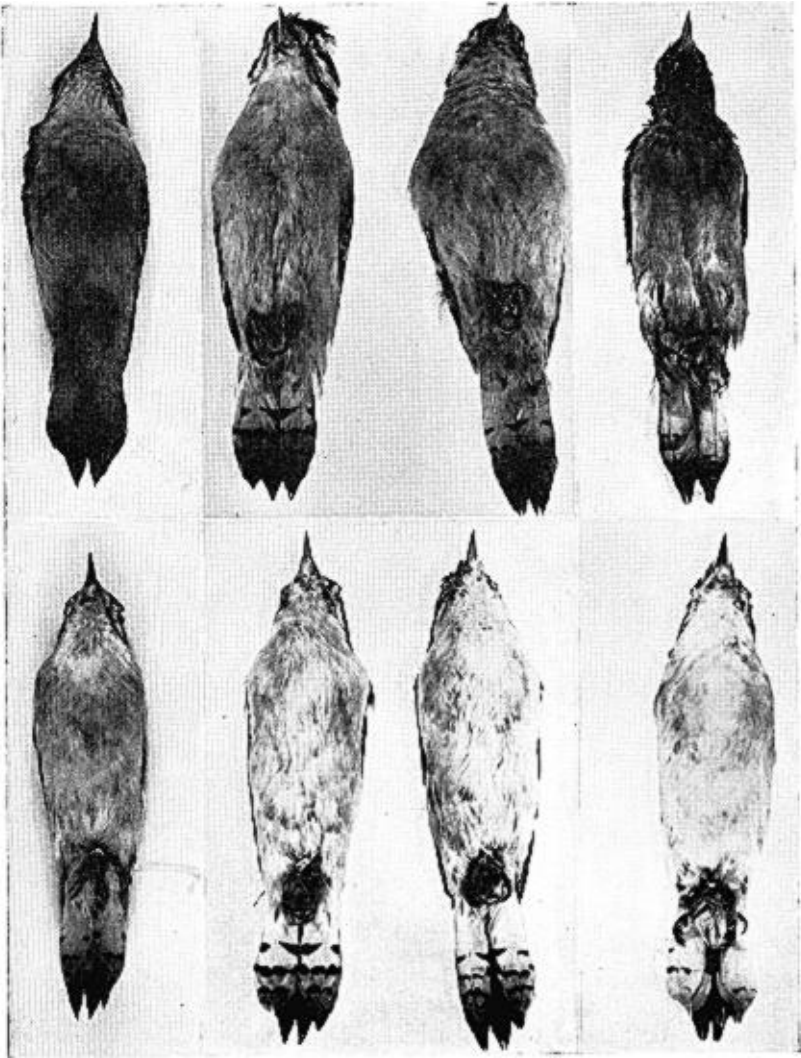


Figure 1. Upper row: Four Downy Woodpeckers, *Dryobates pubescens*, freshly collected, ready for washing and skinning.

Lower row: The same four Downy Woodpeckers, washed and prepared as skins by the junior author.

River that he fell to washing every bird that he took. The results of this somewhat heroic treatment were astonishing. Dingy Baltimore Orioles emerged fluffy and brilliant, their gay colors completely restored. A breeding male Blackburnian Warbler (taken at Lake Terra Alta, Preston Co., West Virginia) that appeared to be abnormally dull, came out normally bright. Solitary Sandpipers that were gray-bellied came out white-bellied as they ought to be. Song Sparrows with vague chest-streaking came out clearly marked. After washing a hundred or so birds during the course of several seasons of study, he decided that thoroughgoing taxonomic work on upper Ohio Valley birds was utterly impossible without washed material. As a result practically the whole of his private West Virginia collection is washed—from kinglets and gnatcatchers to hawks and owls. With specimens of this sort in hand the various shades of grays or browns can be compared and described with some degree of assurance that their darkness is the result of feather-color rather than of dirt.

At Cornell University most locally collected specimens now being added to the Louis Agassiz Fuertes Memorial Collection of Birds are thoroughly washed before they are skinned. While the process is somewhat onerous and time consuming, the results are most gratifying. Mild soap is used in making a thick suds, the plumage is thoroughly washed and rinsed, and the specimen is dried before skinning begins. Cleaning a Hairy Woodpecker may require ten or fifteen minutes. But the time is well spent.

#### THE METHOD

Several birds may be washed at the same time. If small, they must be washed soon after shooting even in cold weather, for the belly-skin quickly becomes tender. Suds may be made from Lux in hot water, then cooled to about the temperature of the hand before washing begins. Bloody birds should be washed *in plain cold water* until all clots are loosened and stains removed, before they are put into suds. Blood-covered plumage becomes heavily viscous in soapy water.

All the birds (the wet ones that have had the blood washed off, and the perfectly dry ones) are now put into the tepid suds, their mouths plugged thoroughly with non-absorbent cotton. They are washed by being moved rapidly back and forth held loosely in or under the fingers. Belly plumage of nuthatches, creepers, and woodpeckers sometimes must be rubbed between thumb and fingers until it is free of dirt. No part of the plumage can be neglected.

After the bird has been thoroughly washed it must be rinsed in clean, cold water. Two or three complete immersions are desirable. It may then be put on cheesecloth, on an old linen napkin, or paper toweling and gently blotted until no water drips from the feathers.

Next it is immersed in naphtha or carbon tetrachloride,<sup>1</sup> gently squeezed or "wrung out," and the blotting process is repeated. It is now ready for plaster of Paris. With the aid of an old tooth brush, it is put through this stage of the process quickly, the powder being dusted through the feathers until they are dry. The powder must be patted and shaken and blown out of the feathers. The specimen is taken outdoors, if possible. The plaster must be blown off thoroughly lest a "bloom" cling to the feathers.<sup>2</sup>

Now the bird is skinned. If certain shot wounds continue to bleed, corn-meal or plaster is liberally applied and the holes plugged with cotton. If an eye has been shot, the sclerotic fluid is blotted up by pressing the ball firmly from the outside with a plug of absorbent cotton. If, by the time the skin has been removed, certain parts are blood-stained, these parts must be washed again with plain water, carbon tetrachloride applied to hasten evaporation, and the damp plumage again dusted through plaster. Before the skin is stuffed the plumage must be pounded and blown free of plaster.

#### SHOREBIRDS

A transient shorebird is fat. Its plumage usually is not dirty, however. If it is merely bloody, it may be skinned out *without preliminary washing*, carefully scraped free of fat, washed thoroughly in plain water, then plunged into naphtha or carbon tetrachloride, and finished with dusting through plaster. If its plumage is dirty as well as greasy, the well-scraped skin must be washed in thick suds, rinsed thoroughly, blotted inside and out, dipped into carbon tetrachloride, blotted again, treated inside with borax (or other preservative), then run through plaster. One difficulty with treatment of this sort is that the whole skin may be stretched a bit. If the bird is washed before skinning, the skin will not be pulled out of shape in the least.

#### BADLY SHOT SMALL BIRDS

It is occasionally necessary to preserve the skin of a small bird that has been very badly shot. The remark calls to the senior author's mind his first West Virginia specimen of Connecticut Warbler. This bird, collected at close range, was "all there," but it was exceedingly fat and its rear parts were so badly shot that by the time the skin was removed all the plumage was grease-soaked. Skins of this sort, though they appear to be hopeless, may be made into first-class speci-

<sup>1</sup> Carbon tetrachloride is expensive but non-inflammable. Its fumes are poisonous, so it should be used with care. However, the authors have used it for years, suffering no ill effects.

<sup>2</sup> Black birds such as crows and grackles rarely need a complete washing. If they need extensive washing their plumage should be dried with a fan if possible, the feathers being lifted and patted with a clean brush.

mens if they are immersed in carbon tetrachloride with great care, allowed to "soak" for a few minutes, then blotted, and run through plaster. If shot wounds need to be sewn up, the skin must be moistened with water before needle and wet silk thread are used.

#### DUCKS

Ducks are rarely dirty, but they usually are fat. If most of the fat is removed by scraping with a scalpel or snipping with scissors, the skin may be immersed in carbon tetrachloride or naphtha for an hour or so (or all night!), then stuffed without being run through plaster. By the time the skin is finished the feathers will have become perfectly dry.

#### CAUTION

1. If it is not possible to wash a small bird soon after it is killed, better not attempt to give it a general washing. Especially is this true in hot weather. Specimens that are "slipping" cannot be washed without loss of many feathers.

2. A bloody bird must be washed *in plain cold water* first, then put into suds.

3. *Never* put a soapy bird directly into carbon tetrochloride. Thorough rinsing in plain water is very important.

#### REMARKS

This question may well be asked: How can perfectly clean specimens be compared with anything but other perfectly clean specimens? The answer to this question may take the form of another such query as: How can we compare *any* two birds until we know exactly how much dirt is in their plumage? Much taxonomic work has been done in North America recently. Many new subspecies have been named and are being named. Is it not reasonable to suggest that this headlong rush be stemmed a bit, that more care be used in preparing material, and that absolutely clean birds be preserved? Once we have before us series of clean, well-prepared skins we will not need to resort to such time-honored phrases as "allowing for dirt," "disregarding this discoloration of the underparts" and so forth, and will know whether our winter Song Sparrows are brown-backed or gray-backed or, in fact, gray-brown in tone.

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