

The "ghost" owl on the windowpane —→

The two photographs herewith presented have been lost (or at least buried) in the editor's files for some 25 years. But since they have never, to our knowledge, been published, and since they illustrate a rarely demonstrated biological attribute of some birds, they are published herewith.

The window shown was the window of a tannery in Johnstown, Fulton County, New York. It looked out on an old colonial cemetery. On the morning of October 19, 1950, there was found on this window the imprint of an owl, in pale white dust, so clearly outlined that individual feathers could be counted, and even the shafts, veins, and barbs of the beathers could be discerned, (but unfortunately not in the photograph). The image was visible for several days, even after having been washed with rain.

The "ghost owl" image on the window seems to be that of a Screech Owl, *Otus asio*, which must have struck the window in full flight during the preceding night. The wingspan appears to be about 22 inches. The owl apparently did not succumb from the im-

print, at least not immediately, for there was no *corpus delicti* beneath the window.

In a note in *Bird Study* 20 (2) 143-4, S. Wilton and A. Robinson describe a similar imprint made by a Barn Owl on a windowpane in England "so delicate and detailed that everyone who saw it was reminded of an exquisite Japanese etching. Every barb at the tip of its wings... could be counted." The note raised the question "Is the imprint material a remnant of original feather formation or currently and continually produced by the feather? It deserves more biochemical study."

The best explanation for the imprint is that it is a transfer of the oily powder produced by some herons and birds of prey in the "powder down" feathers. These are tiny powdery scales or flakes together with fragments of feather barbs, a kind of pulverized feather refuse which apparently serves to help in plumage sanitation.

—Robert Arbib

A symbol for individuals not adult males

Erik Kiviat*

When observing dimorphic species of birds in which adult females and immature individuals of both sexes are not readily distinguishable from each other under field conditions, but are easily separated from the adult males, it is useful to have a single shorthand symbol for all dull-plumaged birds that are not adult males. In such situations, I use the symbol ϕ (Greek letter *phi*) for all birds not sexed, reserving the conventional symbols δ and ♀ for individuals of identifiable sex. For example, with the Red-winged Blackbird (*Agelaius phoeniceus*) in spring migration it is often not possible to separate adult females, first-year (yearling) males and first-year females. In this case all "brown birds" are designated $\phi\phi$ unless close observation permits assignment to sex and age class. With the Wood Duck (*Aix sponsa*) in summer, many gray-plumaged individuals cannot be specifically recognized as either juvenals, adult females, or adult males in eclipse (basic) plumage. All such ambiguous individuals are

designated $\phi\phi$. The symbol ϕ might also be useful with monomorphic species when color bands or behavior permit sex identification of some but not all individuals, any individual of unidentified sex denoted ϕ .

The symbol ϕ is mnemonic as used here, since the words *female* and *first-year* have the same initial phoneme as *phi*. The symbol is also a diagrammatic hybrid of δ and ♀ . It can be formed on a standard typewriter keyboard by combining the characters o and /. (Or if the characters M and F are used for male and female, P could be used for *phi*). I have used this symbol in my field notes for four years, but have not seen any symbol used for this purpose in the literature.

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Window from outside



Window from inside