But for some unknown reason such is not the case. I have made, during the past ten years, a special effort to find the nests of birds in *Olneya*, inspecting diligently literally thousands of trees and have been impressed by the almost complete absence of nests. Mr. Wilson G. Hanna who has for years been a persevering collector of birds' nests and eggs, as well as data on birds, has had a similar experience. As do I, he raises the query: Why do so few birds make use of the ironwood as a nesting tree? "No doubt there are exceptions," he once said to me, "but my experience has been that the ironwood is not used when other trees are near by."

Other than those made by the phainopepla which feeds on berries of the mistletoe, I have found in *Olneya* less than a dozen nests. Several of these were very old and may have been those of the mourning dove. Four were those of the verdin, *Auriparus flaviceps*. A verdin's small roosting nest and two large incubating nests I found in a single tree. The other, a roosting nest, was found in a tree near by. All four nests may have been built by the same birds during two successive seasons. I have one record of a nest of a Sonora black-tailed gnatcatcher, *Polioptila melanura*. Mr. Hanna tells me that he has on a number of occasions found the nests of the western red-tailed hawk, *Buteo jamaicensis calurus*, in ironwood.

The phainopeplas which build in *Olneya* trees are probably attracted more by the protection and food provided by the mistletoe than by any special advantages offered by the trees. In other words, the relation is primarily between the birds and the mistletoe, and only secondarily between the birds and the trees.

Several times I have found in long-dead ironwood limbs the excavations of the ladder-backed woodpecker, *Dendrocopos scalaris*, but I could not find evidence that a nest had been built in them, except in one instance. As a general rule, seasoned ironwood is so exceedingly hard to chisel into that small woodpeckers are not attracted to it. This woodpecker occasionally works into the smaller, softer branches to obtain the larva of wood-boring beetles that often infest the inner wood.

Both verdins and gnatcatchers frequently hunt over the small leafy twigs for insects and insect larvae, especially small curculid beetles and leaf-eating larvae of a number of smaller moths.

During the winter season, it is quite a common experience in the daytime to flush long-eared owls, *Asio otus wilsonianus*, from among the top branches. Both in summer and in winter, the larger trees are a favorite roosting place for the gambel's quail, *Lophortyx gambeli*. They offer the birds excellent shelter, both from wind and from avian and mammalian enemies. The quail, like the phainopepla, are often able to flourish in some of our broad waterless desert areas largely because of their habit of eating the berries of the desert mistletoe, in addition to insects and the succulent leaves of several species of *Lycium*.—EDMUND C. JAEGER, *Riverside College, Riverside, California*.

"Probability" in subspecific determinations: some comments. — A. L. Rand's paper on subspecific identification (Auk, 65: 416–432, 1948) has so much to recommend it, in setting the stage for discussion, that I trust the following comments will not be considered too amiss.

1. Probability, even to those who are not statisticians, has come to have a mathematical or numerical connotation. A better term is "likelihood" even though this word also is beginning to have numbers attached to it. Perhaps the only nonstatistical choice is "sweet reasonableness."

2. It is increasingly clear that little can really be said about variation within a population until we can speak statistically. The mean and extremes of a character

tell us almost nothing. The actual statistical distribution within populations, if known, would enable us to speak of the statistical probability that an individual with a given value for a character belongs to one or another population.

Harrison's case of the mallards (Rand, Auk, 65: 420–421, 1948) offers a chance of estimating the probability of correct identification when several characters agree with those of one race. Six characters are given as separating *Anas p. platyrhynchos* from *conboschas*. If we assume, for the argument, that as regards any one character 25 per cent of birds of *platyrhynchos* ancestry show the *conboschas* form of the character, then $(0.25)^5$ or 0.1 per cent will show five characters agreeing with *conboschas* and $(0.25)^6$ or 0.024 per cent will agree in all six characters. In round numbers these are one bird in 1000 and one bird in 4000. If no selection was involved in gathering the series (not an *a priori* likely supposition), then the chance of the birds described being truly *platyrhynchos* is proportional to the number in the series. Based on the assumption and agreement of six characters the chance is 1 : 1 in a series of 4000 but is 10 : 1 against in a series of 400, using round numbers.

It is, of course, assumed throughout the preceding paragraph that the characters shown by Harrison's British-taken specimens are actually those proper to *conboschas*, rather than facsimiles.

3. The figures for wing-length of the two mallard races (256–278 mm. and 280–295 mm.) may, depending on statistical distribution, be significantly different or not, and the mean length (267 versus 288 mm.) will do no more to determine this significance than will the extremes. At least the standard deviation is needed.

4. If it be contended that color cannot be expressed in numbers, I submit that the contention is unfounded. Not only may gross color be measured with considerable exactness but I venture to predict that the time is not far distant when we will commonly describe the microscopic details of feather color and speak in numbers of the color, size, and distribution of melanin granules and other items in the coloration.

5. On page 420, Rand considers that the probability of taking either *Anas crecca* or *A. carolinensis* in Greenland is even. What is meant is that each species has the same possibility of being taken. Possibility may be regarded as a non-numerical concept in the sense that it has only two values: zero and not-zero. However, if we assume for each species an equal probability of occurrence for the two sexes, then the probability for females may be estimated from the numbers of males of the two species actually taken. From Hörring and Salomonsen I find (omitting the specimens of *crecca* listed on page 9, whose exclusion from other lists is uncertain) that the chance of taking *crecca* vs. *carolinensis* is two and one-half to one in favor of the former (20 male *crecca* against eight of *carolinensis*). Since the ratio of females is 10 : 2, I suspect the cited authors assigned only the indubitable females to the rarer species. The different probabilities of the occurrence of the two species do not, in themselves, affect the probability of a correct identification on purely morphological grounds, but they afford an estimate of the correctness of a series of such identifications.

6. On pages 429 to 430 the question of the status of a breeding wanderer in the range of another subspecies is raised. I venture to submit that it retains the status acquired by birth. That is, the character of an individual depends on its ancestry and not (*pace* the Michurinists) on its current environment. The view that two subspecies cannot share the same habitat applies to populations, not to stray individuals. The view is contradicted by *Parus major* and by certain rodents, although these are exceptional cases.—CHARLES H. BLAKE, *Massachusetts Institute of Technology, Cambridge 39, Massachusetts.*