

owl. In checking considerable ornithological literature, I have been unable to find reports of two calling periods relative to the time of year. Bent, in his "Life Histories of North American Birds of Prey," Part 2, has given an interesting account of Screech Owl calls, but no mention is made of seasonal differences in calling habits. For so common a little owl, it seems incredible that these calling periods have escaped the attention of ornithologists and naturalists.

Sometime during middle or late January, the Screech Owl at this latitude begins the spring "mating call," *who-who-who*. Infrequent at first, this "mating call" may become a nightly owl song period by March and through April. I have not noted much variation in this spring "mating call," the mellow-sounding *who-who-who's* remaining about a steady tone, with a slight inflection, lasting a few seconds to die away abruptly and a little later repeated. During May and June, the call is not heard with regularity. By July, the young are fully fledged and are sometimes heard giving their guttural calls. The "mating call" at this time has decreased in frequency and is replaced by the familiar tremulous whistle or so-called "screech" that becomes the regular call from this period until January. That the tremulous whistle is often followed by a *who-who-who* closely resembling the "mating call" is cause for some confusion, but the nature of its delivery as compared with the spring call is sufficiently altered so as to make differentiation possible.

My observations indicate that Screech Owls have two distinct call periods summarized as follows: After a brief period of silence in early January, the "mating call" is started and used throughout the spring months and until mid-summer. No "screech" is used during this time except during the mid-summer change-over when both calls may be heard. As the change-over is completed, the "screech" becomes the regular late summer and fall call, lasting until January when again the calls are switched.—FRED HOUGH, *Accord I, New York*.

Coloration of *Pharomacrus mocino*.—The present note is to put on record some observations made a number of years ago that I am no longer in a position to repeat or confirm. It is my hope that someone with access to an electron microscope and a spectrophotometer will do this. Similarly, I am not able to document properly some observations and references to literature.

The basic facts are that the male quetzal is largely brilliant green above and bright red below and that these two colors are very nearly complementary. The apparent color of the upperparts varies with the angle of view and of incidence of the light from red to deep blue. The relation between angle and color is that proper to interference colors. The underparts show no indication of interference colors. Professor Hans Mueller (Massachusetts Institute of Technology) agreed that the main color of the upperparts was caused by interference but that there might be a trace of diffraction color. The latter source is common in insects but has never been found in birds.

The ventral red feathers contained a pigment whose solubility and color indicated that it was probably a carotenoid.

The barbules of the dorsal feathers viewed by transmitted light under the microscope were "blood" red. No granulation of the pigment was seen. So far as I know the pertinent literature, those feathers that show interference colors are stated to be pigmented with melanin, and this pigment occurs in discrete granules resolvable with the light microscope. I could find no pigment whose solubility suggested carotenoid. A caustic digest yielded a dispersion whose absorption spectrum was nearly the same as that from an appropriately diluted digest of

feathers of *Corvus brachyrhynchos*. A photograph taken with the electron microscope in Professor C. E. Hall's laboratory (Massachusetts Institute of Technology) suggested strongly the presence of discrete granules well below one micron in diameter.—CHARLES H. BLAKE, *Museum of Comparative Zoology, Cambridge, Massachusetts*.

An Unusual Winter Plumage of the Goldfinch.—Each winter, a number of Goldfinches (*Spinus tristis*) come to the feeding station in my yard. On 16 February 1959, I first noted a bird, presumably a male, that had retained the black crown and forehead characteristic of the summer plumage of the male. The bird has reappeared this winter, being first seen 30 November 1959, and still present as I write this on 20 January 1960.—ARETAS A. SAUNDERS, *Canaan, Connecticut*.