hawk was orange and its legs and feet were orange with black nails. Its bill and cere were black. The extremely long legs, which are characteristic of *Geranospiza*, are shown in figure 1. This nestling is now specimen no. 6234 in the Leiden Museum.

The fourth nest was found on September 3, 1963, and was on an orchid in a shade tree at a height of about 20 meters from the ground. This nest contained two incubated eggs which were white and unmarked. They measured 47.9 x 38.8 mm. and 48 x 39.6 mm.

The fifth nest, found on September 21, 1963, was in a fork of a shade tree. This nest was at a considerable height from the ground and was well hidden. Like the other nests it was discovered because the parent birds flew around calling constantly. The nest contained one fresh egg, white and unmarked, which measured 50 x 39.9 mm. and weighed 44 gm.

My six eggs average smaller in size than the six eggs of *G. nigra* mentioned by Sutton(*op. cit.*).

The nesting season of the Crane Hawk in Surinam seems to be rather extended for nests have been found from May until the end of September. — F. HAVERSCHMIDT, *Paramaribo, Surinam, October 1, 1963.*

Light Sensitivity and the Function of the Nictitating Membrane in a Nocturnal Owl.— The vast literature treating the strigiform eye falls well short of providing a clear explanation of the use of the nictitating membrane. In an abortive attempt to explain what is now accepted as parallactic localization in birds, Dunlap and Mowrer (Jour. Comp. Psychol., 11, 1930:99–113) seem to be the first to have suggested the use of the nictitans in protection against intense light. Friedmann (Jour. Comp. Psychol., 14, 1932:55–61) cites this reference and goes on to suggest that the habit of nocturnally oriented species of owls of sitting with their nictitans closed when exposed to bright sunlight would support this theory. He does not, however, provide any experimental evidence, and he bases his conclusions on field observations which he admits are "rather crude." Austin (Birds of the World, 1961:155) accepts this theory, but the scope of his book would give me reason to believe that he is following the literature in which, however, I am nowhere able to find conclusive evidence for this function.

Observations which I have made on a hand-reared Barn Owl (*Tyto alba glaucops*) from Hispaniola suggest that the nictitating membrane in this species plays no significant role in light shielding. Taken from its nest when just a few days old (estimated 5–6), this bird of unknown sex has been kept in a normally lighted house subject to the normal photoperiod for Cambridge, Massachusetts. When 9 to 10 weeks old, the bird was taken outdoors on bright sunny days at which time no noticeable effort was made on the owl's part to protect its eyes from the intense rays of the sun. It is true that the bird did not look directly at the sun, never coming closer than an estimated 30 degrees to either side, but this behavior would be expected of most vertebrates exhibiting a wide range in retinal components. All subsequent ventures outdoors with this owl gave similar results.

Even more indicative are observations made indoors on various occasions when this bird was seen perched on top of household lampshades peering directly into lighted electric bulbs. This behavior was observed several times between the time when the owl was 22 weeks of age and the present time (now 46 weeks old), and never was he seen to close his nictitating membranes under these circumstances, except in normal blinking. Such instances involved his staring directly into 100-and 150-watt, frosted light bulbs at a focal distance of less than one foot for a period of not less than 5 seconds.

In order clearly to substantiate these observations a test was made in which an unshaded 100-watt, 120-volt, frosted Westinghouse light bulb was waved directly in front of the owl's face at a distance of less than 12 inches for a period of 15 seconds. This test could have been run for a longer time duration, but there seemed little point to it. Immediately following the test the bird was encouraged to leave its perch. It flew unhesitatingly to another perch across the room and landed without difficulty. During the actual test itself, the owl stared inquisitively at the light without pause and neither blinked nor used his nictitans in any other fashion during the 15-second period. The subsequent flight and landing were made in what appeared to be a perfectly normal manner indicating not even a temporary loss of sight from the light.

Friedmann's observations on owls resting while exposed to sunlight are no doubt valid but are of no intrinsic value here. This same Barn Owl, which was exposed to natural and artificial light

without inducing nictitation, was occasionally observed with its nictitans drawn across its eyes while resting or sleeping in a dimly lit closet. Thus this behavior appears to be a normal characteristic of sleeping Barn Owls and irrelevant to the problem of retinal shielding.

In conclusion I might add that Dice's (Amer. Nat., 79, 1945:385–416) experiments on comparative sensitivity to low intensity lighting in three species of nocturnal owls (*Strix varia, Asio otus*, and *Tyto alba*) and one diurnal species (*Speotyto cunicularia*) demonstrate that Barn Owls are among those species most perceptive at weak light intensities. My observations of the Hispaniolan Barn Owl in the field indicate that this form is no less nocturnal in its habits than the mainland form which Dice studied.

These observations in no way rule out the possibility of a light-shielding use of the nictitans in other owls, particularly in members of the Strigidae, but it seems highly unlikely that this function is common among Barn Owls. The employment of these membranes as corneal lubricators and cleansers, as well as their use in protecting the eye from contact with foreign material seems incontestable, but further investigation is needed if we are to describe additional functions for these interesting membranes in owls.

Drs. Ernst Mayr and Raymond A. Paynter kindly read and commented on the manuscript of this paper. — DAVID O. HILL, *Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts, November 22, 1963.*

The Pacific Nest Records Scheme in 1963.—In 1955 the Department of Zoology at the University of British Columbia set up a system for collecting data on nesting birds, "The British Columbia Nest Records Scheme," under the direction of M. T. Myers. It received support from faculty and students at the university and from many amateur ornithologists throughout the Province. The Natural History Societies, in Vancouver and Victoria, and the North Okanagan Naturalists club have been active supporters from the very beginning of the scheme.

At first the scheme gathered data from British Columbia, but by 1956 cards were being received from Alaska, Saskatchewan, and Washington. It was decided to expand the scope of the nest records

TABLE 1

NUMBER OF CARDS IN FILES AS OF JANUARY 1, 1963, WITH ESTIMATED NUMBERS FOR 1963

Region	Number of cards							
	To 1957	1958	1959	1960	1961	1962	Total to date	Est. 1963
Yukon	38	1	—	—	—	—	39	0
British Columbia	3072	2382	1808	1195	1232	1468	11157	2600
Washington-Oregon	116	102	403	356	282	230	1489	300
California	3	71	30	131	140	155	530	150
Interior states	1	160	135	352	299	3	950	50
Total	3230	2716	2376	2034	1953	1856	14165	3100
Alaska	133	109	105 — Given to Alaska Nest Records Scheme					
Prairies	36	66	22	{ Given to Prairie Nest				
N.W. Terr.	12	30	—	} Records Scheme				

scheme, and in 1957 M. T. Myers, I. McT. Cowan, and M. D. F. Udvardy (Condor, 59, 1957: 308–310) appealed for wider support from ornithologists in the western United States. The response was very encouraging. A total of 333 cards were received from the West and 109 from Alaska. As the British Columbia scheme continued to grow, Dr. R. B. Weeden and Dr. A. J. Erskine established similar schemes in Alaska and in the Maritime Provinces, respectively. The Museum of Natural History in Saskatchewan also established a scheme covering the Prairie Provinces. As the scheme had at that time cards from Alaska, Alberta, Saskatchewan, and the Northwest Territories, these were given to the Alaska and Prairie schemes to augment their files. At present our files, which as of January 1, 1963, contained 14,165 cards, cover five arbitrarily defined regions: Yukon Territory,