

**DICHROMATISM OF THE SCREECH OWL  
IN CENTRAL OKLAHOMA**

BY GEORGE M. SUTTON

About noon on a fine day in late April of 1969, I happened to see a red-phased Screech Owl (*Otus asio*) perched on a horizontal branch about 20 feet up in a large elm on the university campus in Norman, Cleveland County, central Oklahoma. The slightly comical ball of feathers was several feet out from the tree's trunk, directly above a narrow stretch of bare ground between a much-used sidewalk and a much-used street. All in all, the spot was ill-chosen for any owl's privacy, I thought, to say nothing of the bird's safety.

I sincerely wondered how I happened to see the owl at all. I had not been looking for it. No fussy mob of little birds had drawn my attention to it. It and its perch were only slightly hidden by twigs and leaves. Checking this particular point, I moved about under the owl, ascertaining that from only one or two angles was it quite invisible. Nor did it look much like a dead stub sticking up from the branch. There it sat, the embodiment of imperturbability and composure. It was full grown. Its eyes were so nearly closed that they were mere slits. What kept it from being conspicuous was its utter motionlessness — that and its somewhat barklike color pattern.

I said nothing to anyone about the owl that day, for I did not want it to be



**YOUNG EASTERN SCREECH-OWLS**

*Photo taken during May 1960 in Fletcher, Comanche County, Oklahoma, by Lee Ridgway.*

harmed. I did not expect to see it again, for I guessed that it had been ousted temporarily from its favorite hollow stub, perhaps by a squirrel, and that it would return to its stub early next morning. About noon the following day, however, I found the owl again on precisely the same branch, facing in the same direction (northeast), with the plumage of its underparts so fluffed that I could not see its feet. This time, after allowing the hubbub of passing students and automobiles to subside, I tried a bit of "squeaking." The owl heard me, for it turned its head slowly and opened its eyes a little as it looked in my direction.

Day after day, for more than a week, I found the owl at this same spot. On 11 May, I showed it to James R. Purdue, a graduate student, who photographed it several times that day (see Bull. Oklahoma Orn. Soc., 1973, Vol. 6, p. 1).

I knew that Screech Owls nested on or near the campus, for I had found recently fledged owlets there on several occasions. Most adult birds that I had seen in and near Norman had been gray-phased, yet here, almost as if advertising itself, was a red-phased one whose failure to roost in a cavity puzzled me. For years I had considered gray-phased birds more protectively colored than red-phased ones. Indeed, whenever I had thought about the matter, I had been unable to understand how the process of evolution could eventuate in an adult plumage with colors and patterns that differed as strikingly as those of red-phased Screech Owls did from those of gray-phased birds. What was the point of evolution if it resulted in such disparity? Could the two color phases be equally serviceable, equally protective? Might the co-existence of the two phases actually be part of the Screech Owl's "survival of the fittest"?

An important fact that had influenced my thinking was this: *Otus asio* was not by any means strictly nocturnal; it loved to sun-bathe. In the eastern United States — the area throughout which it was two-phased — sun-bathing red-phased birds had, in my opinion, been much easier to see than gray-phased ones. In West Virginia, one gray-phased bird that I had watched day after day had so filled the entrance to the small cavity in which it roosted that when it sat there sun-bathing I had difficulty seeing it at all. So much like the gray bark was the gray bird that for all I could see of the cavity's entrance, there was none.

The series of 77 adult Oklahoma Screech Owl skins in the University of Oklahoma bird collection has accumulated without anyone's attempt to obtain one phase or the other. Most of the specimens have been found dead along streets and highways — victims of traffic. Fifty-two of them are gray, 25 red. A few of them — gray birds with a brownish tinge on the upperparts — might be called "intermediates." Two pale birds that appear to me to be intermediate are both from Texas County in the Panhandle, and these are the only specimens from that county. All specimens from farther west, in Cimarron County, are decidedly gray and heavily marked. No wholly red individual in the series is from the area north of Roger Mills County and west of Payne County. Of the 41 adult specimens from central Oklahoma (Cleveland, Oklahoma, McClain, Canadian, and Grady counties), 24 are gray, 17 red.

The series before me strongly suggests that gray birds are about twice as common as red ones throughout the part of Oklahoma in which both phases occur. One can but wonder whether the red phase is disappearing. Why should

the Screech Owls of northwestern Oklahoma all be gray? Are forces operating there harder on red birds than on gray ones? Did red birds formerly occur there? Is the Screech Owl of the Black Mesa country actually *Otus asio*, or is it another species? The question is not idle. The vocalizations of Screech Owls in that part of Oklahoma call to mind a "bouncing ball." Never have I heard there the quavering whistle that I have so often heard in Norman.\*

The dichromatism of *Otus asio* in central Oklahoma has been of special interest to me since 1967, for that spring a red-red pair nested in a birdbox in Harold S. Cooksey's yard in Norman — the first "all red" pair on record for the state, so far as I could ascertain. The female of the pair was banded on 30 April. Of the brood of five, two were "definitely red-phased" and the other three were thought to be "more or less red." All five young were banded. During the following spring the banded adult was the female of a red-red pair that nested on the Lincoln School grounds about 225 yards from the Cooksey birdbox. That pair and their brood of three (color phase uncertain) all came to grief (Comer and Cooksey, 1973, Bull. Oklahoma Orn. Soc., 6:1-5).

Winter after winter during and since that of 1974-75, a Screech Owl has passed the day in a cavity of an old maple across the street from my house in Norman. The species has not nested there, nor has it roosted there in summer, but winter after winter until recently the bird that has been there has invariably been gray, and on most bright, calm days I have seen it sun-bathing. I have made no attempt to capture it for banding. It may not have been the same bird right along, of course. On 17 February 1975, Tom Blevins photographed it for the Norman Transcript. From 18 December 1978 to 30 January 1979 I saw it virtually every day. On 23 December 1978, Orville O. Rice, of Topeka, Kansas, photographed it. In February of 1979 some boys found a gray bird, mortally crippled by traffic, in the street about 300 yards from the old maple. For several days about that time I saw no owl at the cavity, so assumed that the one I had been seeing there was the one that had been struck by the car. In the late fall of 1979, a gray bird roosted there regularly.

In early January of 1980, I saw no owl at the cavity for several days running. On the 9th and 10th, however, an owl was there, and *for the first time it was red*. Stephen Sisney photographed it for the Transcript. For me it was much more conspicuous than any gray bird had been. This was only my opinion, of course, but the opinion lent weight to my belief that if the red phase is disappearing in Oklahoma it may be because the red birds here are more frequently the victims of predation than gray birds. The Great Horned Owl (*Bubo virginianus*), a common and somewhat diurnal predator in Oklahoma, is quite capable of catching Screech Owls, and sun-bathing red-phased Screech Owls might be easier than gray birds for the big owls to see.

In his thoughtful paper on "Polymorphism in the Screech Owl of eastern North America," D. F. Owen (1963, Wilson Bull., 75:188) explains the absence of red-phased birds from western North America as "probably the result of environmental factors which prevent its establishment there." Owen obviously

\*Since this writing, the Western Screech-Owl (*Otus kennicottii*) has indeed been recognized as a distinct species in the sixth edition of the American Ornithologists' Union Check-list of North American birds (1983). Its range in Oklahoma appears to be restricted to northwestern Cimarron County (Grzybowski, J.A., Bull. Oklahoma Orn. Soc. 16:17-20, 1983).

believes that the existence today of both red and gray phases in eastern North America [including much of Oklahoma] "is indicative of selection for bimodal variation" — in other words, that *Otus asio* survives throughout a vast part of North America not in spite of its two color phases, but because of them. In a more recent paper, James A. Mosher and Charles J. Henry (1976, *Auk*, 93:614-619) present data indicating that red-phased birds survive severe winter weather less successfully than gray-phased birds as a result of "color-related metabolism differences" in their makeup. This would suggest that during the unusually severe winters of 1977-78 and 1978-79 in Oklahoma more red birds than gray perished here as a result of exceptionally low air temperatures and heavy snowfall. I have no data in support of such a concept. Of the eight Screech Owls found dead during those winters in central Oklahoma (and preserved as skins or skeletons in the University of Oklahoma collection), six were gray, and two red. Seven of them, including both red ones, were victims of road traffic. One gray bird may have died of starvation. It was found, barely alive, clinging to the end of a juniper branch not far above ground in a residential part of Norman on 25 January 1978. A series of ten Screech Owls found dead on highways in southern Oklahoma by John Sandidge (four from Bryan County, four from Carter County, one from Pushmataha County, one from Marshall County) in the fall and winter between 20 February 1976 and 12 March 1978, contained two red-phased birds.

(Deceased), NORMAN, OKLAHOMA 73069, 9 MARCH 1980.

**Ed. Note** — Some of the above information was alluded to in Dr. Sutton's popular account of these species in his recently published book, *Birds Worth Watching* (Univ. Oklahoma Press, Norman, pp. 76-79, 1986).

## GENERAL NOTES

**Barnacle Goose in Caddo County, Oklahoma**,—About 450 yds (400 m) southwest of my home 4¼ miles (6.8 km) northeast of Anadarko, Caddo County, Oklahoma, lies a pond surrounded by a field of winter wheat. The pond, probably less than 12 in. (30 cm) deep, covers approximately 10 acres (4.5 ha).

At 0650 on 20 November 1985 (clear, bright, 27°F), I noticed 50 or 60 Canada Geese (*Branta canadensis*) loitering near the pond. At 0720, I set up my 32× telescope and studied them closely. Among the Canadas was a strange goose with such a distinctive black and white pattern that it immediately caught my attention. Having formerly been a game biologist for several years with the Oklahoma Department of Wildlife Conservation, I was familiar with North American waterfowl to be expected in Oklahoma, but this one was certainly not among them. Although it was the size of one of the smaller races of Canada Goose, both its chest and neck were black (only the neck is dark in *B. canadensis*). A sharp vertical line of contrast was created where the black lower chest interfaced with the white of the belly. The dorsum, too, was dark. Most striking of all was the brilliant white head — including throat, cheeks and forehead — that stood out vividly from the bird's black neck and crown. In addition, I could tell that the eye color was light, possibly yellow.

At 0741, the entire flock flew off to the west. I hastily consulted a field

guide. There was no doubt that this bird was a Barnacle Goose (*Branta leucopsis*).

According to the A.O.U. Check-list of North American birds (6th ed., 1983, p. 69), this Old World species is casual in North America, particularly the northeastern U.S., and has been reported as far inland as Nebraska, Colorado, Oklahoma, and the Gulf Coast of Texas on rare occasions. Some of these birds had presumably escaped from captivity, but others may have been vagrants.

There are five published records for Oklahoma: (for details, see Hawthorne, B.J., 1975, Bull. Oklahoma Orn. Soc. 8:5; and Green, R. K., 1981, Bull. Oklahoma Orn. Soc. 14:13).

The following points should be borne in mind: the Barnacle Geese reported thus far in Oklahoma have all been single birds seen between 7 November and 1 March; each was observed in association with large flocks of Canada Geese; and all but one were on or near national wildlife refuges.—Bud Exendine, *Rt. 1, Box 147, Anadarko, Oklahoma 73005, 2 December 1985*.

**Unusual fishing behavior of an Osprey.**—On 24 September 1985, John G. Newell and I observed at least three Ospreys (*Pandion haliaetus*) at Lake Hefner, Oklahoma County, Oklahoma. More than once we saw a bird dive to the water, catch a fish, then fly off, presumably to find a perch where it could eat its prey. About 1530, however, I observed a bird about 400 yards away that was carrying what I took to be a fish which it held, one foot in front of the other. Instead of flying off to eat the fish, the bird made a shallow dive toward the water, but pulled up well before striking it. Several seconds later (after I had located the raptor with my 15× telescope), I clearly saw it plunge toward the water, drop the first fish just before hitting the surface, catch a second fish in its talons, and fly off.

The following points strike me as worth noting: (1) the Osprey did, apparently, trade one fish in its talons for another it had to catch in the water, the second appearing to be slightly larger and shinier; (2) the Osprey waited until the last possible second before dropping the first fish, and (3) because the dead (or injured) fish landed near where the second was caught, the Osprey could have returned for it, should it have missed the second fish.

I have seen many Ospreys dive down and catch a fish, then fly to a perch to devour it, but never have I seen this type of “trade” described above. A. C. Bent describes no such behavior for the Osprey in his discussion of the species (1937, Life histories of North American birds of prey, Pt. 1, U.S. Natl. Mus. Bull. 167, Wash., D.C., pp. 369-371). Steve Sherrod (pers. comm.) informs me that young Ospreys frequently engage in “play” behavior similar to the above, but I could not tell whether or not the bird I saw was immature.—John S. Shackford, *Rt. 1, Box 125, Oklahoma City, Oklahoma 73111, 3 October 1985*.

**Ruby-throated Hummingbird banded in northeastern Oklahoma recovered in south-central Texas.**—The recovery of a Ruby-throated Hummingbird (*Archilochus colubris*) nearly 500 miles from where it was banded is noteworthy. The history of Number X29588 is unique in my nine years of hummingbird banding. During this period I have banded a total of 1,641.

On 8 July 1983, I placed band number X29588 on an adult female hummingbird in my yard 5 miles south of Jay, Delaware County, northeastern

Oklahoma. She was captured in one of my two cylindrical, drop-door traps baited with a commercial nectar feeder containing a solution of one part sugar and four parts water. The possibility that she was a Black-chin (*A. alexandri*) was ruled out by careful measurement of the bill and by the fact that only twice in nine years had I encountered other than Ruby-throats in this vicinity. Number X29588, though new to me, showed the worn plumage of an adult bird and a full-length bill (19 mm). (The exposed culmen of 10 adult female specimens measured by Robert Ridgway in the U.S. National Museum ranged from 17 to 19.5 mm and averaged 18.2. The same measurements for an equal number of adult Black-chin females were 19.5-22, averaging 20.6 mm (Ridgway, R., 1911, *The birds of North and Middle America*, Pt. 5, Bull. U.S. Natl. Mus. 50, pp. 629, Wash., D.C.)). She was recaptured on 7, 8, 13, and 19 August, a total of five times, in both the front and back yard traps.

This was a period of increasing activity in our local hummingbird population. The first fledglings had come in during the week, and many females banded during May were recaptured after an absence of several weeks. During the 1984 season she visited my traps on 31 May, 6 June, 9 and 23 July, and 30 August. Again, she was caught a total of five times during the summer.

In 1985 she was back for a third year. I captured her once on 20 May, twice on 22 May, and once more on 14 August.

The first and last date that she was recorded each year are comparable to those of prior years and are typical for hummingbirds that summer in our region: she was neither the earliest to arrive nor the last to depart.

The recovery of this bird on 16 September, 1985 at Kerrville, in south-central Texas, revealed that she journeyed roughly 475 miles southwest in a month's time. The report from the Bird Banding Laboratory at Laurel, Maryland, informed us only that she was found dead and reported to a local game ranger. A friend, Mrs. C. C. Boyd, whom we met in Alaska during the summer of 1985, by chance happens to live in Kerrville, and obligingly contacted the game ranger for us. He reported that this bird had somehow entered a construction building and began to bump repeatedly against the high ceiling. Four hours later it finally dropped to the floor, completely exhausted. It died before compassionate observers could rush it to wildlife officials.

This is my first and only "foreign recovery" (official terminology) of a hummingbird beyond two miles from the home station. Though a total of 241 individuals (17.6%) banded for at least a year have subsequently returned to our yard, their recovery elsewhere is an almost unheard-of incident.

In an effort to determine the normal route of autumn migration for Oklahoma Rubythroats, I searched 40 years of fall migration reports in Audubon Field Notes (1949-1970) and its successor, *American Birds* (1971-1985). In the Southern Great Plains section, which includes Jay, Oklahoma, on its eastern margin and Kerrville, Texas, midway across the southern border, I found only two references, one for 1977, the other in 1984. "Adult Ruby-throated Hummingbirds were abundant throughout W. Texas *where they are normally rare*, in late August and early September (1977). There is no way to estimate how many of the hundreds of female and young hummers present were also Ruby-throateds." (Williams, F., 1978, *Amer. Birds* 32:225; author's italics); "A Ruby-throated

Hummingbird in the foothills Aug. 24 (1984) completed the roster of Big Bend hummers" (Williams, F., 1985, Amer. Birds 39:74).

Number X29588 is noteworthy not only for the fact that her history has been documented, but also because she pursued a course considerably west of her place of origin and the normal route of her species.—A. Marguerite Baumgartner, Rt. 2, Little Lewis Whirlwind Nature School and Sanctuary, Jay, Oklahoma 74346, 18 December 1985.

**Opportunistic feeding on insects by European Starlings.**—While at a truck stop in northeast Tulsa, Tulsa County, northeastern Oklahoma, shortly before 0700 on 28 August 1985, we observed six to ten European Starlings (*Sturnus vulgaris*) cleaning recently killed insects from a windshield and grills of six parked semi trailer-trucks. The weather was clear and calm. The flock landed on the grill of the first truck and picked off all the insects there. They next moved to the second truck grill in line, then to the third, and so forth, until all the grills were clean, then they flew off. One starling landed on the hood of the first truck, flew to the windshield, and secured a perch on a wiper blade, from where it plucked all the insects within its reach. Although every truck had a short flattened hood, we saw no starling on any other windshield. This entire sequence of events lasted less than 10 minutes.

The European Starling is a very adaptable species and thrives in association with man. C. Feare (1984, *The Starling*, Oxford University Press, New York) discussed feeding adaptations used by this bird, but made no reference to the above-described behavior. Nor did a search of recent literature reveal instances of this or similar foraging strategy.

W. T. Beecher (1978, *Feeding adaptations and evolution in the Starlings*, Bull. Chicago Acad. Sci. 11:269-298) points out the ability of starlings in the genus *Sturnus* to rotate the eyes forward, enabling them to sight down the bill to see food items while probing. This adaptation no doubt facilitates the accuracy and speed with which European Starlings glean insects from truck grills, but this is obviously a learned behavior.

At no time were starlings seen at automobile grills or windshields. Considering the size difference of "foraging area" and the availability of truck grills versus smaller automobile grills, this seems to make sense. Large trucks are frequently parked in rows that face open areas, thereby providing an easily exploitable resource, whereas autos are most often parked indiscriminantly.—Bruce Miller and Carolyn Wright, *Oklahoma City Zoo, 2101 N.E. 50th St., Oklahoma City, Oklahoma 73111, 25 September, 1985.*

**Common Grackles exhibiting partial albinism in southwestern Oklahoma.**—While driving in open pastureland between subdivisions 2 miles east and 2 north of downtown Lawton, Comanche County, Oklahoma, at 0820 on 20 May 1985, I observed a piebald Common Grackle, *Quisacalus quiscula*. There were numerous other black-colored birds in the immediate vicinity, including about 25 Common Grackles, a few Brown-headed Cowbirds (*Molothrus ater*), and several European Starlings (*Sturnus vulgaris*). I returned to this location at 1100 and again at 1330, each time observing this odd-plumaged

grackle for several minutes through a 9×35 binocular. The bird's head was gray, washed with white, and its outermost rectrices were white. White splotches on the torso and wings ranged from dime to quarter size. This bird was extremely wary and would not allow me to approach closer than about 100 feet.

Although I drove by this site daily, I saw the piebald grackle only once more. On 28 May 1985, a grackle quite similar to the one described above (and quite possibly the same bird) flew across the road 25 to 35 feet ahead of me.

On 9 April 1986, at a place less than a mile south, I saw another black and white grackle. It flew past my vehicle and lit on a wooden fence next to the road. At least three quarters white, this bird actually appeared to be white with black spots. Due to heavy traffic, I was unable to stop and study the grackle, and by the time I returned, it was gone. Because albinistic black birds become whiter with each molt (Sage, B. L., 1962, Albinism and melanism in birds, *Brit. Birds* 55:201-225), and since the 1985 and 1986 sightings were in such close proximity, the possibility that I saw the same piebald grackle two years in succession cannot be completely discounted.

During a U.S. Fish and Wildlife Breeding Bird Survey in Cotton County, Oklahoma, on the morning of 21 June 1986, Jack D. Tyler and I discovered a partially albinistic Common Grackle among a flock of about 80 others. This female bird was light brown except for its all-white primaries. We watched it for approximately 15 minutes. It and most of the flock eventually flew from a barbed wire fence between plowed fields to a highline near a grove of soapberry trees (*Sapindus drummondii*) along the road. The surrounding habitat was mostly sandsage grassland interspersed with cultivated fields 2 miles west and 5 south of Randlett.

Although partial albinism in grackles is not unheard of (Sutton, G. M., 1967, Oklahoma birds, Univ. Oklahoma Press, Norman, p. 557), it is sufficiently uncommon to warrant further investigation. Pure albinos (complete absence of pigment or melanism) are comparatively rare. Only 7% of 1847 records of albinism in North American birds represented total or pure albinism; other forms are more common (Gross, A. O., 1965, *Bird-Banding* 36:67-71). These include incomplete albinism (pigment lacking in eyes, plumage or naked parts but not all three), imperfect albinism (pigment reduced or diluted in one or more of these areas), or partial albinism (pigment locally absent, as above). *Quiscalus quiscula* ranked fifteenth among the 28 species most commonly reported to exhibit some form of albinism in North America, with 23 cases (1.24%) out of the 1847 (Gross, *op. cit.*). Sage (*op. cit.*) stated that albinism may result from numerous causes: heredity, inbreeding, diet, senility, shock, disease and injury.—Larry L. Choate, *3110 NE Kingsbriar Circle, Lawton, Oklahoma 73507, 1 July 1986.*

---

THE BULLETIN, the official organ of the Oklahoma Ornithological Society, is published quarterly in March, June, September, and December, at Norman, Oklahoma. Subscription is by membership in the OOS: \$5 student, \$7.50 regular, \$10 family, \$15 or more sustaining, per year. Life membership \$125. Treasurer, Bill Dirck, Box 65, Ada, Oklahoma 74820. Editor, Jack D. Tyler, Department of Biology, Cameron University, Lawton, Oklahoma 73505. Associate editors, John S. Shackford, Rt. 1, Box 125, Oklahoma City, Oklahoma 73111, and Dr. William Radke, Department of Biology, Central State University, Edmond, Oklahoma 73034. Questions regarding subscription, replacement copies, or back issues should be directed to the treasurer. ISSN 0474-0750.