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The REDSTART

VOLUME 46, NUMBER 3 JULY, 1979

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The REDSTART

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What Happened To Them?

By Maurice Brooks

Every bird student who has observed in one area for a number of years is abundantly aware of continuous fluctuations in bird populations. A species, generally common and widely distributed one year, will be unaccountably rare or absent the next. Forthcoming years may see a return to conditions that we have assumed are normal, or the species may not regain its former numbers. This gives added importance to local observation and careful note taking; if these notes are published then we have the happening as a matter of record.

My own experience watching birds extends back more than 65 years, most of it in West Virginia. When I take time to think about it, I am amazed at the radical shifts that have occured in some populations in my own lifetime. Birds that were abundant as I was growing up are now scarce or completely missing. We have had gains of course -- these are gratifying -- but the losses have generally outweighed the gains.

Take a few examples. During the earlier years of this country, we expected to see white herons -- Common and Snowy Egrets, and white-plumaged Little Blue Herons -- each summer along almost any stream or pond in the state. I remember one July trip I took with my family when we counted seven white herons in a few miles in Randolph and Pocahontas Counties. It's now a good many years since I have seen a white heron in West Virginia.

Spotted Sandpipers used to be taken for granted, lively features of the margins of almost every unpolluted stream. I've looked for them where I saw them in past years -- along the Cheat and Greenbrier, nearby beaver dams on Dolly Sods, and on the tributaries of the Potomac in the Eastern Panhandle. In the past ten years I have not been lucky enough to see one individual.

Any evening trip outside Morgantown in the proper season would produce Whip-poor-wills, calling or feeding along country roads. Not in many years have I seen or heard one bird in Coopers Rock Forest or adjacent areas.

Red-headed Woodpeckers in all their beauty were of common occurrence almost everywhere in the state. Abundant chestnut trees afforded a wealth of suitable nesting trees. In recent years I am lucky if I see one Red-head in a year's time.

Twenty-five years ago Cliff Swallows nested under the eaves of dozens of barns in the Terra Alta region. They were locally common in Barbour, Randolph, Tucker and Pendleton Counties. In mid-August they assembled by the thousands in many areas along highways, particularly in our mountain country. They have almost disappeared at their breeding sites, and I have not in many years seen a fall assemblage.

A drive through the South Branch Valley never failed to turn up Loggerhead Shrikes on wires above the highway or in crataegus trees which dot the pastures. As late as five years ago I still found a few individuals, but since then none at all.

When we moved to our present home at the edge of Morgantown a pleasant feature was a nightly chorus of calls from Henslow's Sparrows coming from a pasture of orchard grass just below our residence. They kept at their weak efforts to vocalize all during the nights in July and August; we regularly invited birding friends out to hear them. The last one I heard here six years ago.

These are a few among many such instances. There are at least five examples of even more radical population shifts.

1. Olive-sided Flycatcher. One of the joys of a trip to Cranberry Glades, to Canaan Valley, to the old Stony River Dam, or to High Cheat was the assured calling of Olive-sides. Their loud, clear three-note vocalizing was a welcome feature; it spoke eloquently of the North Country of which it is a symbol.

Then, unhappily, they all but disappeared in their former haunts. Until we found one in a tortured strip-mined area of Cheat a few years back, I had not heard one in years. There have been a few other reports; I urge all who may be visiting the Snowshoe resort in summer to be on the lookout for them. There are large areas there which look suitable to the birds' needs. (See "Foray Bird Report" **Redstart** 46 (1) 7, Ed.)

2. Bewick's Wren. During my boyhood at French Creek there was scarcely a farmstead in the community that didn't have a nesting pair of Bewick's Wrens. They arrived about the first week in April each year, they sang and scolded mightily, and they were welcome residents. In our early years in Morgantown they nested in our garage, and in other buildings nearby. Then in a few years they were gone, completely, it seems. I heard one singing in rural Grant County about four years ago, but no others anywhere in the state.

3. Dickcissel. Never as widely distributed as some others on this list, Dickcissels were, 25 or 30 years ago, regular summer residents in suitable places in West Virginia. They seemed to demand alfalfa fields, and for several years they nested in such fields on a University farm near Morgantown. Karl Haller found them fairly common on upland fields in Jackson and Mason Counties. They were regularly reported in Berkeley and Jefferson Counties. We even had one that remained all winter at our feeder in Morgantown.

I have seen or heard none in recent years, nor do I know of a report of one.

4. Lark Sparrow. I suppose you would call it the eastern race, but never mind; Lark Sparrows were abundant breeding birds in a large portion of the state during early years of the 20th century. They were showy birds, singing continuously from perches on telephone lines or fences. The males seemed to delight in displaying the white feathers in their tails. Their nests, on the ground at edges of rocky pastures, were easy to find; my Dad and I located 14 nests near our home in one season.

As I drove along roads east and west in the state, I could spot them on the wires. It's a long time since I have had that pleasure.

5. Bachman's Sparrow. During those years when Lark Sparrows were common at French Creek, Bachman's Sparrows, much better vocalists, were equally common. They shared with some other sparrows the habit of singing at night. They opened with a sustained flute-like note, wonderfully clear and piercing on a summer's night, then followed with a trill. Their semi-domed nests were hard to locate, but we found a good number.

In the Morgantown area I last heard these birds in groves of walnut trees along roads from Morgantown to Fairmont and Grafton. Then they, too, were gone.

As to the causes of these disappearances, I shall not even speculate. My primary purpose in writing this is to urge every reader of **The Redstart** to report, in print, occurrence of any of these birds which comes to his attention. We need to know their present status. Are they gone permanently, or do a few linger? Are they showing any signs of increasing anywhere, or must we assume that they are gone for good? Give all of us the advantage of your findings.

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The Status of the Woodland Salamanders In West Virginia

Thomas K. Pauley

Introduction

In recent years there has been considerable confusion among students of herpetology as to the status of the genus *Plethodon* in West Virginia. This confusion is a result of taxonomic revisions and the description of two new species of this genus (Valley and Ridge Salamander, *Plethodon hoffmani* and the Cow Knob Salamander, *Plethodon punctatus*) within West Virginia. The purpose of this paper is to review this genus of Woodland Salamanders and, hopefully, to eliminate any confusion.

Salamanders of the genus *Plethodon* are, along with several other genera, members of the family of lungless salamanders, Plethodontidae. In comparison to the other genera of this family, plethodontids have a more slender body with legs that are somewhat similar in size.

Seven of the thirteen eastern species of *Plethodon* are found in West Virginia. There are two distinct sizes of plethodontids, the eastern small *Plethodon* and the eastern large *Plethodon*. The smaller species have a snout to vent length that ranges from 5.7 to 11.0 cm while the larger species range in snout to vent length from 10.0 to 17.0 cm.

The eastern small *Plethodon* found in West Virginia are: (1) Red-Backed Salamander (*Plethodon cinereus cinereus*); (2) Ravine Salamander (*Plethodon richmondi*); (3) Cheat Mountain Salamander (*Plethodon nettingi nettingi*); and (4) Valley and Ridge Salamander (*Plethodon hoffmani*). The eastern large species include: (1) Slimy Salamander (*Plethodon glutinosis glutinosis*); (2) Wehrle's Salamander (*Plethodon wehrlei*); and (3) Cow Knob Salamander (*Plethodon punctatus*).

HABITAT AND LIFE HISTORY OF THE GENUS

As the common name (Woodland Salamanders) implies, the members of this genus are commonly found in a mixed deciduous forest. They are most active during damp or rainy nights, at which time they can be found crawling on the ground or even on the sides of trees. During the day they retreat to burrows or hide beneath stones or logs. This retreat to damp areas is essential to prevent desiccation.

The eggs of most species (the eggs of the Wehrle's Salamander have never been found) are deposited in small clusters in moist logs, under stones, and similar habitats. Unlike most other genera, there is no free swimming larva stage, i.e., development takes place in the egg and the young salamanders are completely terrestrial and independent of the adults.

The food of woodland salamanders is largely ants, earthworms, a variety of insects, and other invertebrates. Feeding activity is probably the greatest during the salamanders' most active periods, viz., rainy nights.

DISTRIBUTION AND DIAGNOSTIC FEATURES

Plethodon cinereus cinereus and *Plethodon glutinosis glutinosis*

Distribution: The Red-Backed Salamander and the Slimy Salamander are the most ubiquitous of the seven *Plethodon* species found in West Virginia. The Red-Backed Salamander is more common in the Northeastern and Northcentral States, whereas, the Slimy Salamander extends into the Southeastern and the Southcentral States. In West Virginia the Slimy Salamander is found in all 55 counties, while the Red-Backed Salamander if found in all counties except the most western and southwestern counties (Figure 1).

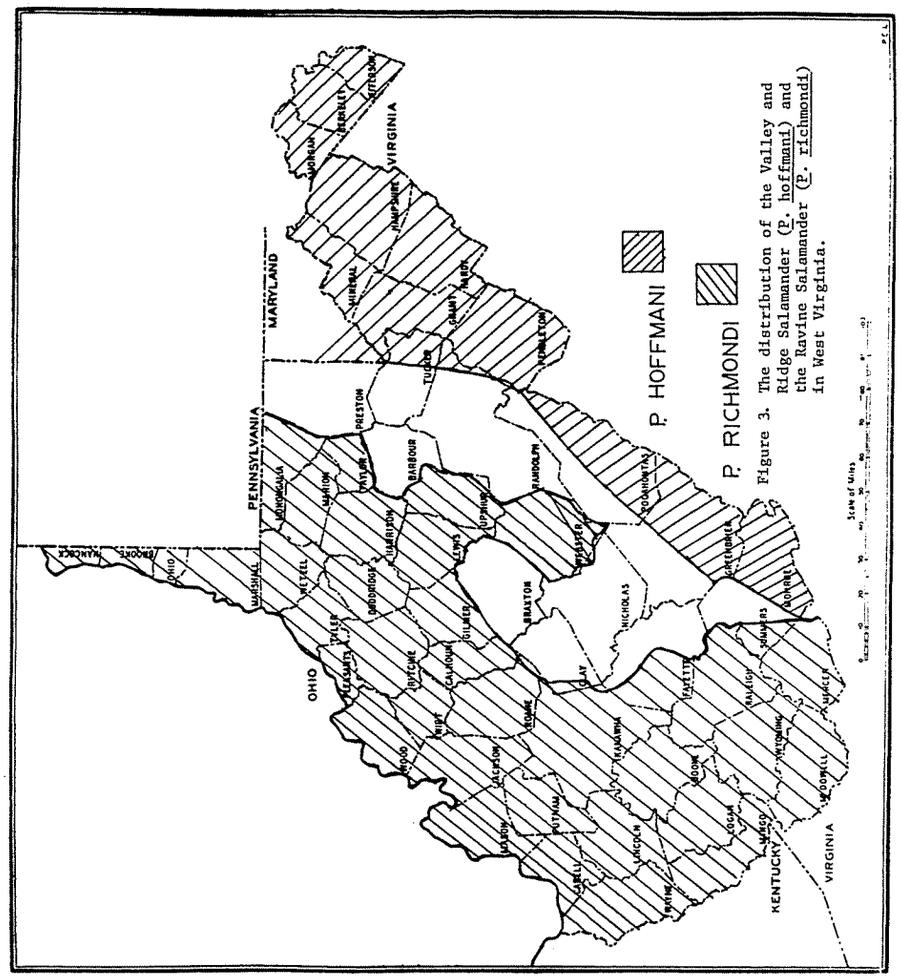

Figure 3. The distribution of the Valley and Ridge Salamander (P. hoffmani) and the Ravine Salamander (P. richmondi) in West Virginia.

Diagnostic features: The Red-Backed Salamander is an eastern small *Plethodon* with a reddish dorsal stripe and dark sides. Even though there is a lead-backed phase, i.e., the dorsal stripe is not present, the Red-Backed Salamander can easily be distinguished by the characteristic salt and pepper pattern on the belly. While the costal groove number (Figure 2) ranges from 18 to 20, most of the West Virginia specimens have a costal groove count of 18 or 19 (Conant, 1975).

The Slimy Salamander is a black eastern large *Plethodon* with white dorsal spots. The belly, chin, and throat are uniformly dark in color and costal groove count ranges from 15 to 16, with 16 as the modal number (Conant, 1975).

Plethodon nettingi nettingi

Plethodon nettingi nettingi was described by Dr. N. Bayard Green of Marshall University in 1938. In a subsequent study by Highton (1962), the taxonomic status of the Cheat Mountain Salamander was changed to a subspecies of the Ravine Salamander, *Plethodon richmondi*. In 1971, the Cheat Mountain Salamander was once again given full species status (Highton, 1971).

Distribution: The Cheat Mountain Salamander is of particular interest to the West Virginia naturalist for it is only found in the higher elevations (over 3,500 feet) of Pendleton, Tucker, Randolph, and Pocahontas Counties. It is found in areas where Red Spruce and Yellow Birch are the predominant trees or in areas above 3,500 feet where these two species were at one time predominant. The author, with the support of the National Forest Service, is currently trying to determine the ecological status of the Cheat Mountain Salamander.

Diagnostic Features: The Cheat Mountain Salamander is a small, black salamander that may or may not have small brassy or white flecks. The belly is uniformly dark gray to black. The costal groove count ranges from 17 to 19, with 18 as the modal number (Highton, 1971).

Plethodon richmondi and Plethodon hoffmani

Distribution: While the Ravine Salamander and the Valley and Ridge Salamander may be confusing in appearance, their distribution is quite different. The Valley and Ridge Salamander is so named because its range is in the Valley and Ridge physiographic province of West Virginia (Figure 3). It also is found in central and southcentral Pennsylvania and in western Virginia (along the West Virginia border). The Ravine Salamander is found in the western half of West Virginia (Figure 3), western Ohio, Indiana, Kentucky, Tennessee, Virginia, and North Carolina. To date, there is no known overlap of ranges of these two species.

Diagnostic features: These two species are both eastern small plethodontids and are the longest in size of this group. While both are similar in appearance, the Valley and Ridge Salamander has a whiter throat with some white mottling on the belly. The costal grooves number between 19 and 22 (with a modal number of 20) in the Ravine Salamander and 20-21 (with a modal number of 21) in the Valley and Ridge Salamander (Highton, 1971). The combination of throat and belly mottling, costal groove count, and location are the best criteria for distinguishing between these two species.

Plethodon punctatus and *Plethodon wehrlei*

Distribution: The Cow Knob Salamander and the Wehrle's Salamander are both eastern large plethontids that are thought to be allopatric species, i.e., their ranges do not overlap. The Cow Knob Salamander (along with the Valley and Ridge Salamander) was recently described (Highton, 1971) and; therefore, more work is needed to determine its complete range.

The Wehrle's Salamander is more abundant in West Virginia than in any other state

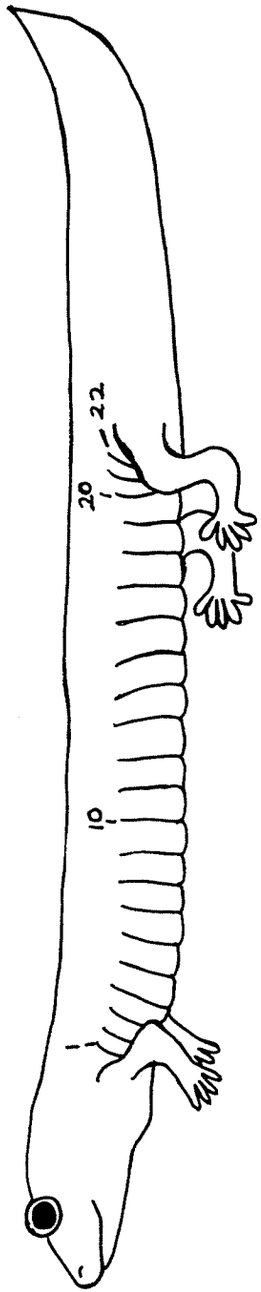

Figure 2. The first costal groove is the most anterior (in the axilla) and the last costal groove is the most posterior (in the groin).

(Figure 4). Its range includes a small area of southern New York through West Virginia, central Virginia, and near the borders of northern North Carolina and western Ohio. Highton (1971) found that the Cow Knob Salamander only occurs on North Mountain (over 2,800 feet) and the Shenandoah Mountains (over 3,000 feet) on the West Virginia - Virginia border.

Diagnostic features: Both of these salamanders are similar in appearance. While the Cow Knob Salamander has numerous white dorsal spots, it lacks the brassy flecks and reddish spots that may be present on the Wehrle's Salamander. In addition, both Salamanders have a whitish throat and irregular whitish spots along each side of the body. There is an overlap in the number of costal grooves between these two species, 16 to 18 (a modal number of 17) in Wehrle's and 17 to 18 (a modal number of 18) in the Cow Knob Salamander (Highton, 1971). As with the Valley and Ridge and the Ravine Salamanders, the location of the area in which the specimen was collected would be helpful in making an identification.

The Slimy Salamander is frequently confused with the Wehrle's or the Cow Knob Salamander. However, the Slimy can be distinguished from these two species by looking for the dark throat and a costal groove count of 16 (Conant, 1975).

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Fall Mortality at Blackwater Falls State Park

Susan E. Taylor and James M. Ruckel

On the evening of October 7, 1978, nearly 200 passerines were found dead on the lodge parking lot at Blackwater Falls State Park near Davis, West Virginia. The lot is blacktopped in three sections; two main parking areas and a roadway leading to the lodge entrance. There are four large dusk-to-dawn lights in the parking lot.

Most of the birds were recovered on the morning of October 8 by park personnel and the area was rechecked later that morning by Mr. and Mrs. James M. Ruckel to obtain any birds missed. Many of the birds had been run over by automobiles, making species identification difficult. Species recovered included 172 Olive-backed Thrushes,

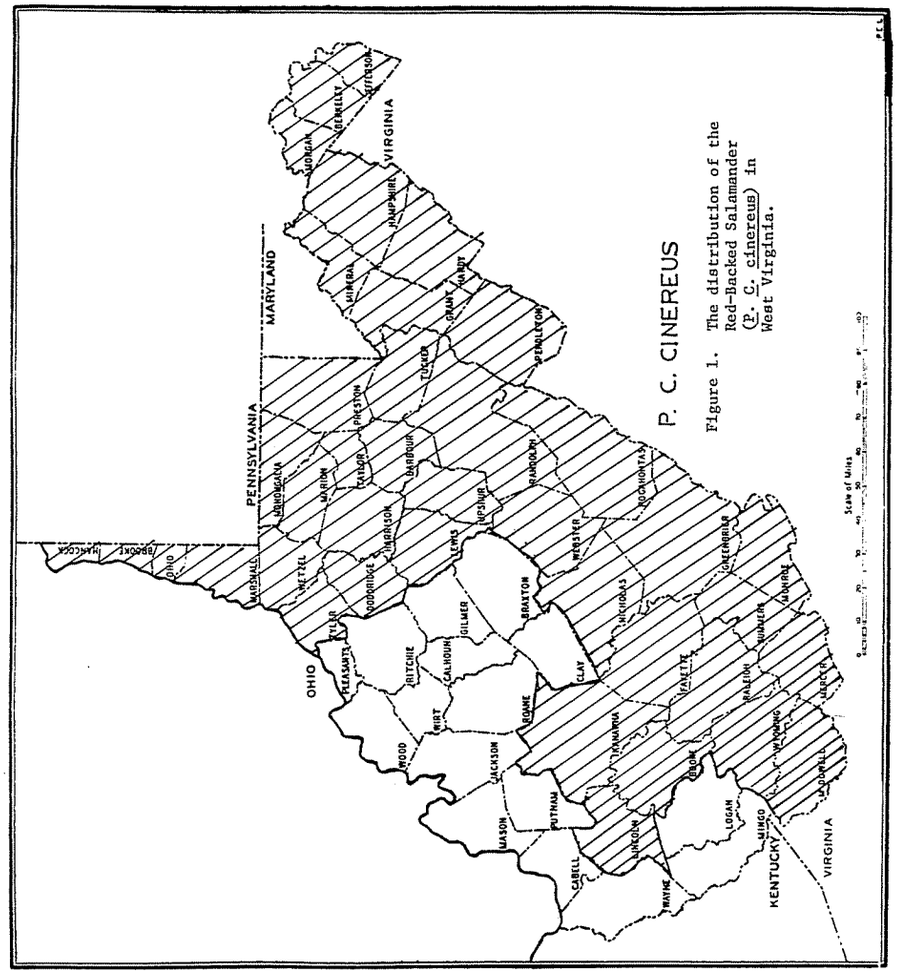

Figure 1. The distribution of the Red-Backed Salamander (P. C. cinereus) in West Virginia.

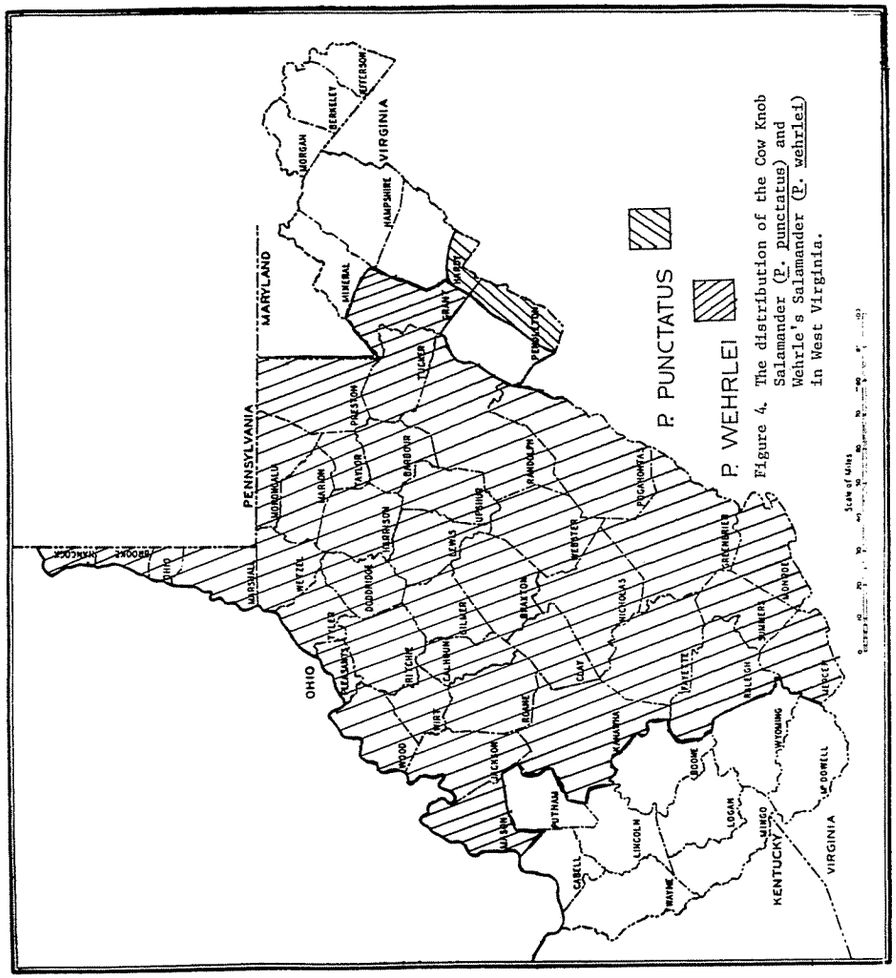

Figure 4. The distribution of the Cow Knob Salamander (P. punctatus) and Wehrle's Salamander (P. wehrlei) in West Virginia.

5 Tennessee Warblers, 4 Wood Thrushes, 3 Catbirds, 3 Blackpolls, 3 Ovenbirds, 2 Pine Warblers, and one Yellow-billed Cuckoo, Song Sparrow, Red-eyed Vireo, Magnolia Warbler, Yellow-rumped Warbler and unidentified warbler totalling 198 birds.

According to the National Weather Service in Elkins the low temperature in the 24-hour period from 7 a.m. October 7 to 7 a.m. October 8 was 34° and the high was 40° reported by the Thomas, West Virginia observer. There was .33 inch precipitation in that 24-hour period. A trace of snow was reported, but most of the precipitation was freezing rain/sleet.

We would like to acknowledge the help of Blackwater Falls State Park personnel for reporting and obtaining the birds, Mary Lee Yelton for sorting and assisting in species identification and William K. Igo for species identification.

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The Great Gull Caper

Leland S. Devore

What may well be the greatest birding discovery in Maryland was made during the winter of 1977, and is continuing during this 1978-79 winter. The reason it had not been found sooner is probably that when birding we think we must get away from civilization. On asthetic grounds, we tend to avoid dumps and sewage plants. They just have a rather poor connotation for us outdoor types!

Anyway, some intrepid birders chose to look for birds at the sewage treatment plants in Baltimore with absolutely facinating results. Although I live some distance from Baltimore, I made a visit to one of the four major plants with interesting results, but some of the persons residing in Baltimore made a winter hobby of such observations and a good part of this data is derived from the observations and reports of Messers E.A.T. Blom and J.L. Stasz of Baltimore.

First a few facts to consider. Thousands of gulls had to be "scoped" and carefully observed. At the "best" sewage plant and land-fill (Back River Plant), populations of 25,000 to 35,000 gulls were not unusual. Since immature gulls are next to impossible to identify positively, only those with mature plumage which could be definitely and surely identified are listed. Most of them were photographed. Prior to this "sewage plant caper" only five species of gulls had been positively identified in the Baltimore area. This one winter's observations raised the number to ten! These included life list birds for almost everyone who really "put in time" at Back River.

The common gulls, and those previously identified where the Herring Gull, Ring-billed Gull, Bonaparte's Gull, Greater Black-backed Gull and Laughing Gull. To this list there were added during the winter and early spring Lesser Black-backed Gull, Iceland Gull, Glaucous Gull, Little Gull and Black-headed Gull. As if doubeling the number of species of gulls previously identified was not enough, the same areas produced a Peregrine Falcon, Red-necked Grebe, Red-breasted Merganser, Ruddy Duck and Roseate Terns!

This "great gull gallery" right under the nose of the dense population of one of the nation's biggest cities just goes to show that we sometimes tend to pass up the obvious. Everyone who for years had glanced at these masses of birds assumed they were just a bunch of common gulls until someone made the effort to really examine these unlikely sites; now they are the local birding hot-spots.

Stay curious -- and have good birding!

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Memories Of A Barn Owl

Joey Herron

My first experience with the Barn Owl was in September of 1974. A month before I had been informed by a friend of a "big white owl" that was staying in a barn near Jane Lew, West Virginia. Being a resident of Weston, just six miles away, I decided to see this "big white owl."

I found out the location of the barn and proceeded, with my friend Brete Griffin, to find this bird. We went to Jane Lew, located the barn, and crossed a stream, hiked through an open field, and found the barn. We stood outside the barn and observed the acres of open field around us in which we guessed the owl hunted during his night-time adventures. It was absolutely beautiful.

The "big white owl" was there, and we identified it as a Barn Owl. He was snowy white below, with traces of dark specks, and had the cinnamon color on his back. Below the loft we found a pile of feathers, which we assumed to be the mate that had been shot. We proceeded to collect some pellets, and then went home.

After examining the fifty-eight pellets collected, I found one-hundred and twenty-three skulls, including two bird skulls, four mole skulls, and one-hundred and seventeen vole and shrew skulls. On six later visits, which ranged from October 28, 1974 to March 16, 1977, I collected 241 pellets. Approximately ninty percent of the pellets collected contained skulls of voles and shrews. I'm sorry to say that on my last visit, which was March 16, 1977, the owl was not there. I later heard the rumor that a housing project would destroy the barn, in which case the owl would have had to leave anyway.

This barn owl has been the only barn owl I've ever seen. I considered it a privilege to have seen him, and learned of him. I made a glass case and mounted some of the skulls I had collected. Whenever I see them, they always remind me of that "big white owl" at Jane Lew, West Virginia.

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FIELD NOTES

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THE WINTER SEASON
December 1 through February 28, 1979

For the third consecutive year, the region had a severe winter. December was wet and mild with 8.02 inches of rain in Charleston, W.Va. The snow began with the new year, covering the ground, already coated by an ice storm in most of the region, until late February. Temperatures were 6 to 8 degrees below normal until mid-February.

It was a year of excellent wild feed, what is often called "a beech nut year." With those conditions, few birds came to feeders during December. Christmas counts seemed to confirm most observations of "no birds". There were only token numbers of

northern finches but all the common species were present, though in reduced numbers. With the onset of inclement weather, birds sought the feeders.

There were some unusual aspects of the winter. Seemingly more E. Bluebirds remained throughout the winter and certainly more A. Robins. There were many comments about the number of Robins "wintering," but a flock of 4000 stayed at North Park near Pittsburgh, Pa. Spring singing started from mid-February, indicating that most species survived the winter in good condition, but Meadowlarks and Bob White Quail were dealt another blow.

Loons, Grebes and Herons - A **Common Loon** lingered through early December at Uniontown, Pa. (VJ). Groups of up to 50 **Horned Grebes** were forced down by an ice storm January 6 and 7 in the Greene, Fayette and Westmoreland County area of Pennsylvania. **Pied-billed Grebes** were thought about normal, Jim Phillips recorded them for December and January on Bluestone Lake in Summers Co., W.Va. **Great Blue Heron** populations appeared about normal in spite of the cold weather.

Swans and Geese - Clark Miller reports a **Mute Swan**, on a pond near Greenspring in the eastern panhandle, that stayed for several days in February. **Whistling Swans** had not completed their migration through the area until after the first of the year. Most of the migration of **Canada Geese** was completed by January first but a skein was observed in Upshur Co., W.Va. January 27 by Keith Jones (fide V.H.). The flock that usually winters at Chester, W.Va. numbered 200-250 this year, and local residents, using pickup trucks, brought unshelled corn for feed.

Waterfowl - Generally waterfowl behavior was pretty normal. Some ducks stayed on ponds during December before the ponds froze, and a few stayed all winter on rivers kept open by navigation or where they were fed regularly. Most records submitted for waterfowl are prior to the end of 1978. Some examples are 60 **Mallards** and two **A. Wigeon** that wintered on Coonskin Pond, Charleston, a mixed group including one **Redhead** that was attracted by the presence of Geese at Chester, W.Va. (EEC) and a **Canvasback** that stayed all winter at Blendon Woods, Columbus, O. (ER).

Vultures and Hawks - **Turkey Vultures** remained in the southern part of our area throughout December, and one was seen in Hampshire Co., W.Va. February 10 (PW fide CL). **Black Vultures** seem more plentiful this year (CM). There were sightings in Monroe Co., W.Va. February 10 (GF) and Pendleton Co., W.Va. February 5 (CR). Ralph Bell reports a **Goshawk** present at his farm again this winter. **Sharp-shinned** and **Cooper's Hawks** again were noted raiding bird feeders, probably this was more frequent because of the prolonged snow cover. **Red-tailed Hawks** wintered in their usual numbers, but the **Red-shouldered Hawk** population is down in the Charleston area (NG). **Rough-legged Hawk** sightings were widespread: Ohio Co., W.Va. Feburary 2, 1979 (BV), Kanawha Co., W.Va. December 16, 1978 (HG), Greene Co., Pa. February 17, 1979 (RB), Augusta Co., Va. February 21, 1979 (KF) and Marion Co., O. January 27, 1979 (ER). An immature **Golden Eagle** stayed near Carmicheals, Pa. from about November 1 to the last of January living on road-killed deer the game commission hauled to a farm (RB). There were four reports of **Golden Eagle** sightings from Pendleton Co., W.Va. during the period (KF and CR). Twenty eight **Marsh Hawks** for the Kingston (Ross Co.) O. Christmas count is considered low (HB). **A. Kestrel** populations seem to have recovered to normal.

Gallinaceous and Shorebirds - **Ruffed Grouse** seemed to be affected some by this winter, one with an apparent leg injury came to a feeder in Buckhannon, Upshur Co., W.V. (MT). **Bobwhite** populations are extremely low after three winters that have been adverse to them, but Virginia Hoover reports seven coming to her feeder in French Creek, W.V. Observers report good numbers of **Ring-necked Pheasants**, one comes daily to Maxine Thacker's feeder in Buckhannon. There are few reports of Turkeys since the good fall hunting season, but the deep snow caused some flocks to forage for food in cattle feed lots. A **Com. Gallinule** stayed on a lake in Rockingham

Co., Va. from November 14, 1978 to January 2, 1979. Reports of **Coot** are limited to December prior to the onset of severe weather. Ninety-two on the Christmas count at Charleston is a record high. Wintering **Killdeer** seemed scarce. Clark Miller reports **Com. Snipe** wintering as usual in the eastern panhandle of W.V.

Gulls, Doves and Owls - A few **Herring** and **Ring-billed Gulls** were noted on the upper Ohio River during the winter months. Wintering **Mourning Doves** are increasing, perhaps the overall population is also? Doves were incubating by the first of March in the eastern panhandle (CM). C.O. Handley Jr. reports two **Barn Owls** roosting on the family farm in Greenbrier Co., W.V. and feeding on Meadow Mice, *Microtus pennsylvanicus* which is at a cyclic high. Some understanding of the plight of **Screech Owls** in the northern part of our area may be gained from the figures compiled for the Wheeling Christmas count under the same conditions and over the same territory. In 1975, 71 screech owls were identified; in 1976, only 46; in 1977 - eleven and in 1978 - six (WB). A note of hope, Jim Phillips lists them as more common in the southern tip of W.Va. It will be interesting to watch the population trend of **Great Horned Owls**. There is evidence of more public interest in helping the bird to sunflower seed, often from the feeder owner's hand. **Brown Creepers** appeared fewer than last year as did **Winter Wrens**. There are a few **Carolina Wrens** being located in the area north of Parkersburg, W.Va., so the wren may be starting to recover, but it will be a long process. Their plight is illustrated by Harold Boecher's figures from Columbus, O. Christmas count. In 1975 they counted 146 **Carolina Wrens,** in 1978 the count was three.

Mimics and Thrushes - Mockingbird numbers seemed lower in most areas, but some wintered as far north as East Liverpool, OH. George Flouer reports a **Brown Thrasher** from Monroe Co., W.Va. February 2, 1979. The winter is noteworthy for the large number of **A. Robins** that stayed over. Whether the deceptively warm weather of December trapped them or not in unknown. Joe Grom and others counted a flock wintering at North Park, Pittsburgh at 4000. Numerous other comments were made including their eating Hawthorn and Crabapples in Columbus, OH (ER). Ralph Bell thought that the beautiful crop of wild grapes was a factor in their staying. One Robin would come to the back step of the Gregg home in Middlebourne each day for food. The returning migrants arrived about February 23-26. **E. Bluebird** survival again looks encouraging.

Kinglets through Shrikes - Golden-crowned Kinglets continue to be in low numbers while a few **Ruby-crowned** were reported on Christmas counts, and one was reported from Hampshire Co., W.Va. February 3, 1979 (PW). **Cedar Waxwings** were widely reported with 200 in Columbus, OH area through January and February feeding on Hawthorn and Crabapple (ER). Only one **Loggerhead Shrike** was reported, that from Princeton, W.Va. December 16, 1978 (JP).

Warblers - Wintering **Yellow-rumped Warblers** seemed about normal with good survival percentage. Noteworthy was a **Common Yellowthroat** on the Kingston (Ross Co.) OH Christmas count (HB).

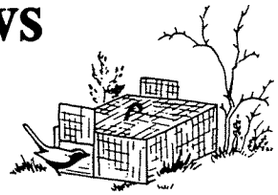
Blackbirds and Finches - The massive invasion of northern finches experienced last winter was absent this year with only token numbers present in most areas. A **Meadowlark** pursued by a **Sharp-shinned Hawk** in Washington Co., Pa. February 11, 1979 was reported by the Higbees. Kathleen Finnegan felt that the heavy snows had killed many **Meadowlarks** in Rockingham Co., Va. where greater numbers winter. A male **Yellow-headed Blackbird** was at a Columbus, OH feeder January 5 and stayed two weeks (ER). A few **Red-winged Blackbirds** were present among mixed flocks all winter, but the return of migrants started about February 26. A **Northern Oriole** survived in Rockingham Co., Va. from December 20, 1978 to February 3, 1979 eating peanut butter and scratch feed. **Rusty Blackbirds** were scattered throughout the area during January. Many were coming to feeders at Columbus, OH through January and

February (ER). Wintering **Com. Grackles** seemed concentrated in the southern portion of our area (3457 on Charleston Christmas count), then started moving north about mid-February. **Brown-headed Cowbirds** were reported throughout the period in Washington Co., Pa. (RMH) and more than usual in Tyler Co., W.Va. (EG). **Cardinal** populations appeared about normal. Although the great numbers of **Evening Grosbeaks** of last year were not present this season, most observers mentioned a few. A flock of 50 spent the winter in Pendleton Co., W.Va. (CR) and Virginia Johnson reported 40 February 25 in Uniontown Pa. **Purple Finches** were widespread but in no concentrations. **House Finches** continue to thrive and expand in numbers. Many were paired and singing by the end of February. A male **Pine Grosbeak** was at a feeder in Uniontown Pa. January 8 and 11 (VJ). **Com. Redpolls** were at Clark Miller's feeder in Berkeley Co., W.Va. February 9. **Pine Siskin** reports were of single sightings. Feeding of thistle seed has increased the observations of **A. Goldfinches**. Whether more are staying north or we are seeing a greater percentage remains a question. More **Rufous-sided Towhees** appeared north of their normal wintering range despite the excess of snow.

Sparrows - There were at least three reports of **Savannah Sparrows** in Rockingham Co., Va., some feeding along roadsides in spite of deep snow (KF). **Slate-colored Juncos** were lower on most Christmas counts, but normal numbers appeared after the snow began to accumulate. **Tree Sparrows** were found in much lower numbers. **Field Sparrows** appeared at feeders occasionally throughout the winter. The Chandlers reported ten in Hancock Co., W.Va. January 28, 1979. Hullet Good had three at his feeder in Kanawha Co., W.Va. January 28. C.O. Handley Jr. indicates that elimination of Multiflora Rose plantings accounts for the decrease of **White-crowned Sparrows** in the Greenbrier Co. area. **White-throated Sparrows** continue to winter in our area in good numbers. There were two reports of **Fox Sparrows:** two at a feeder in Kanawha Co., W.Va. January 22, 1979 (HG) and one at a feeder in Pendleton Co., W.Va. February 7, 1979 (CR). The frequency of song from **Song Sparrows**, beginning early to mid-February, denoted good survival of that species. Two reports were made of **Lapland Longspurs:** Killdeer Plains, Marion Co., OH January 27, 1979 (ER) and Marshall Co., W.Va. February 2, 1979 (Rudy Matesic fide W.B.). **Snow Buntings** were reported from the two observations above and about 250 from Lawrence Co., Pa. February 3, 1979 (RMH) and about 300 in Pickaway Co., OH February 17, 1979 (ER).

Contributors - Wm. Beatty (WB), Ralph Bell (RB), Dr. A.R. Buckelew (JB), Everett & Elizabeth Chandler (EEC), Pam Daugherty (PD), Arthur Dunnell (AD), Kathleen Finnegan (KF), George Flouer (GF), Hullet Good (HG), Edna Gregg (EG), C.O. Handley Jr. (COH), Roger & Margaret Higbee (RMH), Virginia Bly Hoover (VH), Virginia Johnson (VJ), Nevada Laitsch (NL), Charlotte Lanham (CL), Clark Miller (CM), Janis Musser (JM), Jim Phillips (JP), Esther Reichelderfer (ER), Carolyn Ruddle (CR), Maxine Thacker (MT), Betty Vossler (BV), George Warrick (GW) and Patricia Wolford (PW).

BANDING NEWS



Ralph K. Bell, Editor
R.D. 1 Box 229
Clarksville, Pa. 15322

Since House Finches are really moving into this area, I think the following letter from the Bird Banding Laboratory to Merit Skaggs is important.

Dear Mr. Skaggs,

There are several problems involved in ageing and sexing House Finches. Geographic variation and the effect of diet on the plumage coloration complicate the picture. Please *do not* use the article by McEntee (EBBA NEWS, 1970, V.33) to age House Finches.

Birds in juvenal plumage *cannot* be sexed. However, sexing is possible as soon as the postjuvenal molt is complete. Birds with red, orange, or gold on head, throat, rump, and/or breast are males. Females are brown-gray and seldom have more than an occasional red or yellow feather.

Ageing is another problem. Until the problems of geographic variation and diet effect are solved, females must be aged by skull pneumatization -- incomplete = HY/SY and complete = AHY (January-October) and U (November-December). Males with pink edgings to *all* wing coverts can be safely aged ASY (January-May) and AHY (June-December). The wing covert edgings should all be checked in good light. Males which have gold or yellow-orange on head, throat, and rump can be aged HY/SY. All other males *must* be aged by skull pneumatization (imcomplete = HY/SY) complete = AHY, January-October and U November-December).

I hope this information is helpful to you. Thank you for your continued cooperation in the North American Bird Banding Program.

Sincerely yours,

M. Kathleen Klimkiewicz, Biologist
Bird Banding Laboratory

A BANDED BAY-BREASTED WARBLER IS RECOVERED

(Editor's note: Few banded warblers are ever recovered very far away from the banding site. But Ephe Olliver has joined the elite group that has had recoveries. A Bay-breasted Warbler that Ephe banded September 1, 1977 at Allegheny Front Migration Observatory on Dolly Sods, W.Va. was recovered near Corpus Christi, Texas on May 9, 1978. Since we band to learn more about the biology of birds, sometimes the circumstances surrounding the recovery are as important as the recovery itself. Therefore, I wrote to Mrs. H.M. Lewis, who reported the band recovery, and received an immediate reply that was both informative and depressing, but stirs the immagination about the problems birds must sometimes cope with during migration. Bent's "Life Histories of North American Wood Warblers," Part 2, page 380, says that the Bay-breasted Warbler winters in Columbia and Panama and that it seems to avoid Mexico during migration. Evidently most Bay-breasts migrate from Yucatan peninsula directly to the Gulf states or partially across the Gulf of Mexico to the Texas coast. The reply from Mrs. Lewis is quite interesting and will be reprinted here (in part), followed by a newspaper account she included in her letter.

March 6, 1979

Dear Mr. Bell:

Your letter was such a nice surprise. I'm enclosing Kay McCracken's news article on our son, Kevin. It tells the whole story. Kevin was on the living quarters level on the rig. The top level is the Heliport. The men have to investigate all the "wierd" sounds - just as if there was some kind of equipment failure. Horns blow and bells ring. When he and his boss scrambled to the top, Kevin couldn't believe his eyes. The little warblers were coming in like hugh swarms of locusts and they fell exhausted and dying on the deck.

Kevin gathered some in buckets and others were just swept over the side. A glint of light on that one bird caused Kevin to notice it. I'm sure if this had happened in the daylight hours they would have found more of the warblers banded.

According to Kevin's boss, this is a common occurence in a migration period. We don't know if it is a normal route for Bay-breasts. Kevin has had to "put up" with his Mother's love of birds all his life so I feel this alerted him to remove the band.

You might be interested in the antics of the Gannets that land on the rigs. Kevin says they fly straight down into the water with such a speed you would think it would "addle" their brains! Excellent fishermen! They have no fear of man apprently. Kevin walks up to them, can take hold of their long beaks and gently shake them. They just stand there and clack their beaks.

Two weeks ago, two Purple Martins flew into the rig and stayed there all day. They apparently were exausted and starving. They were still there at dusk.

Thank you for your letter. I must head for my studio. I'm a porcelain art teacher, and yes . . . one of my specialties is painting birds!

Sincerely,
Mrs. Lewis

From The
CORPUS CHRISTI CALLER
May 21, 1978
by Kay McCracken

. . . On the night of May 9 thousands, but thousands, of birds came and died on a drilling rig 40 miles out in the Gulf southeast of Port O'Connor. Kevin Lewis of Pleasanton was one of the crew working the rig. He said there was a hard north wind but not expecially stormy. The men playing cards in the recreation room below heard odd noises and went up to the open deck to investigate. The rig is always lighted and they saw thousands of dead and drying birds stacked on the deck and other thousands swirling around and coming down - to die.

Helping to clean the deck, Lewis gathered two 3-gallon buckets full of the birds and came across one with a band on its leg. He is sending the band to the Bird Banding Laboratory and will thereby learn its origin.

These casualties, too, were mostly songbirds. Many had "lots of yellow feathers," and other colors. Among larger birds he recognized purple gallinules. Also a peregrine falcon, alive, that perched and flew and perched and flew, but always came back to the rig.

Fairly new at offshore drilling work, Lewis never had experienced anything like this before but a veteran co-worker told him that it happened every time there was a strong north wind. (He meant north winds during migration periods, I am sure.) On once such

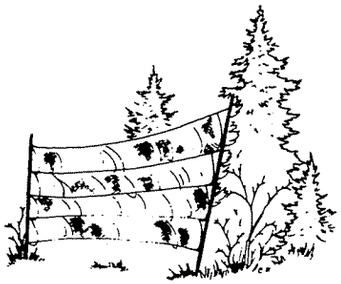
occasion 100 cattle egrets landed and were so exhausted they didn't move when approached. They rested and resumed their journey.

Happier times around the rig are days when gannets romp and fish around the rig, Lewis said. The men call them "hell drivers."

Ona, W.Va. — I did very little banding in January . . . only 46 birds banded and most of these were White-throated Sparrows. February was a little better with 242 new birds banded. There were 116 Purple Finches, 30 Cardinals, 26 White-th. Sparrows and 19 Goldfinch. There were 15 returnes and 2 of these, a Purple Finch and Tufted Titmouse, had both been banded by Maxine Kiff on April 14, 1975 (odd that both old returns had been banded on the same date.

It appears to me that Chickadees, Titmice and Downy Woodpeckers are all low at my feeders this winter (1978-79). I also only have about one-third the White-throated Sparrows I had last winter. Purple Finch are a lot more plentiful and take up the slack. I've seen only one Evening Grosbeak here all winter and the sunflower seed sure lasts a lot longer."

Leon Wilson



In The Literature

In an article, "Birds fly. Why can't I?" **Science** 203: 1230 (1979). Thomas Maugh 11, reports that researchers at Duke have discovered that ducks maintain normal blood flow during hyperventilation. Mammals hyperventilate at high altitude, the pH rises due to a loss of carbon dioxide, blood vessels constrict reducing the flow of blood resulting in death of brain cells. Other investigators had already shown that birds can tolerate a blood pH of 8. In mammals that pH would be fatal. Apparently the ability to maintain normal blood pressure at high altitude and tolerance of high blood pH are important adaptations for flight.

"Feathers of *Archaeopteryx*: Asymmetric vanes indicate aerodynamic function" by A. Feduccia and H.B. Tordoff, **Science** 203: 1021-1022 (1979) argues that the oldest fossil bird, *Archaeopteryx* could certainly fly or at least glide. The well known avian paleontologist, J.H. Ostrom, has suggested that *Archaeopteryx* could not fly and that it perhaps used its feathers to trap insects. Flight feathers of modern birds are asymmetric. That is the vane on the leading edge is much reduced compared with the wider trailing edge. In some strong flyers the leading vane is almost absent. The asymmetry gives the feather an airfoil cross-section and better lift.

Distal ends of second primaries from the wings of (left to right) a flying rail, *Archaeopteryx* and a flightless rail (adapted from Feduccia and Torndoff).

The authors note that fossil specimens of *Archaeopteryx* have primaries clearly assymetric with the leading vanes reduced as in modern birds. They compared these fossils with modern birds both flightless and flyers (see Figure). In the Rails they observed all degrees of flightlessness and corresponding degrees of asymmetry of the primaries. They conclude that the primaries of *Archaeopteryx* are like those of modern flyers.

BBC honorary member George M. Sutton and David F. Parmelee are authors of "On maturation of Thayer's Gull" in **The Wilson Bulletin** 90: 479-491. The article is illustrated by Dr. Sutton's drawing of a Thayer's Gull. David Parmelee and Jean Parmelee are also authors of a report, "Two broods from one Lake Itasca Robin's nest" **The Loon** 50: 189-191. The American Robin is known to have as many as three broods in a season, but the Parmelees' observation of the same nest being used twice is very rare.

Here's a new idea. The Southern Illinois Bird Observatory sponsored its first annual, statewide Summer Bird Count last summer (1978). The results are published by Michael Morrison and John Palis, "Report and results, 1978 summer bird count: Illinois," **The Song Sparrow** 2: 1-14. The counts were made on any day during the count period, June 1 to July 10. Rules are about the same as Christmas counts except any bird seen during the count period can be added to the species totals. Among the stated goals of the project: 1. to increase birding in the summer; 2. to provide estimates of abundance of breeding birds; 3. to enable comparison with U.S. Fish and Wildlife Service Breeding Bird Surveys; 4. to monitor endangered and threatened species.

The results are reported by county. Bureau County, Illinois reported the largest total, 5994 birds. Lake County led with the most species, 137. Many species were transients, but of the total numbers reported, the vast majority were breeding birds.

A.R. Buckelew, Jr., Editor

Book Reviews

Darwin and His Flowers: The Key to Evolution, by Mea Allan. Taplinger Publishing Co. New York. 1977, 318 pp, many drawings and color prints, Price $14.50.

Who was Charles Darwin? **Origin of Species**, natural selection, survival of the fittest, the **Beagle**, the Galapagos Islands and Darwin's finches are phrases which quickly come to mind. Other phrases which may follow are tortoises, variation among breeds of domestic pigeons, the **Descent of Man** and the **Expression of the Emotions in Man and Animals**. But what about "Charles Darwin -- Botanist?" Although Darwin did not consider himself a botanist he studied plants throughout his life.

Mae Allan's book chronicles Darwin's study of plants from his childhood, when he began gardening and learning the names of plants, to the end of his career when he published such works as **The Different Forms of Flowers on Plants of the Same Species** (1877) and **The Power of Movement in Plants** (1880). In addition to his well-known theory of evolution, Darwin studied such diverse problems as: the geographic distribution of plants, the survival of seeds in salt water (important to understand how plants can be dispersed between continents), the pollination of orchids and other plants, the hooks and tendrils of climbing plants, the origin of domesticated plants, the catching and digesting of insects by insectivorous plants, and the effects of self- and cross-pollination.

The depth as well as the breadth of Darwin's interests is continually impressive. In correspondence, he always sought the ideas and observations of others. More important, however, was his extensive and careful experimentation. In one instance, when he was studying competition between plants, he wrote "in a bit of ground, 2 by 3 feet, I have daily marked each seedling weed as it has appeared during March, April and May, and 357 have come up, and of these 277 have *already* been killed, chiefly by slugs." Another time, when studying variation among plants, he counted 20,000 microscopic seeds of one species of *Lythrum*. He also made detailed observations; for example, when studying the climbing ability of plants he wrote "the uppermost part of each branch is *constantly* and slowly twisting round making a circle in from one and a half to two hours; it will sometimes go round two or three times, and then at the same rate untwists and twists in opposite directions. It generally rests for half an hour before it retrogrades. The stem does not become permanently twisted. The stem beneath the twisting portion does not move in the least, though not tied. The movement goes on all day and all early night. It has no relation to light, for the plant stands in my window and twists from the light as quickly as towards it."

Allan quotes extensively from Darwin's own writings and uses quotes to show Darwin's character and personality as well as his scientific achievements. One incident, quoted from Darwin's *Autobiography*, reveals Darwin's humor and humility: "One little event . . . has fixed itself very firmly in my mind, and I hope that it has done so from my conscience having been afterwards sorely troubled by it; it is curious as showing that apparently I was interested at this early age in the variability of plants! I told another little boy (I believe it was Leighton, who afterwards became a well-known lichenologist and botanist), that I could produce variously colored polyanthuses and primroses by watering them with certain colored fluids, which was of course a monstrous fable, and had never been tried by me."

Also apparent in the quotes is the affection and respect between Darwin and his family and between Darwin and colleagues such as Sir Charles Lyell, George Henslow, Joseph Hooker and Thomas Huxley.

One problem with the book is that Darwin's work is not placed in the perspective of modern botany; that is, the reader has little idea of how a modern botanist views Darwin's conclusions. One grave problem is that Allan writes that Darwin's theory of inheritance, pangenesis, is similar to today's understanding of inheritance; unfortunately, a geneticist would probably not agree with this statement.

Overall, however, *Darwin and His Flowers* is fascinating reading for anyone with an interest in natural history and gives a good account of the Darwin's wide interests, keen insight and immense accomplishments.

Janet Lanza
Biology Department
Bethany College
Bethany, WV 26032

A Field Guide to the Nest, Eggs and Nestlings of North American Birds by Colin Harrison. 1978, Wm. Collins Pub., Inc. 208 W. 117th St. Cleveland, Ohio 44111. 416 pp. 64 color plates, many line drawings, Price $11.95.

This comprehensive guide contains short descriptions of the nest, breeding season, eggs, incubation, nestlings and nestling period of North American birds north of Mexico, not including the Bahamas. The color plates showing eggs are excellent. Many are shown approximately life-size. I checked the color against a small egg collection at Bethany College with satisfactory results. This is the first field guide that attempts to illustrate the appearance of nestlings of North American birds. Keys are included for nests, eggs and nestlings and chicks. No range maps or descriptions of range are provided, which may cause confusion for people working in unfamiliar territories. Another field guide would be needed. The hard cover is impregnated with plastic, so the book should be able to take some abuse in the field. Colin Harrison is also author of "A Field Guide to the Nests, Eggs and Nestlings of British and European Birds" published by Quadrangle, the New York Times Book Co.

Harrison is curator of the national collection of birds' nests and eggs at the British Museum (Natural History).

This book will be useful to banders who band nestlings and those who are asked to identify young birds and eggs. Appropriate warnings about the dangers of the slightest disturbance to nests and young are displayed on the back cover and introduction.

Hal Harrison's (no relation to Colin Harrison) "Field Guide to Birds' Nests in the United States east of the Mississippi River" has more lengthy descriptions of nests and eggs and much better illustrations of nests of eastern birds. Furthermore Hal Harrison's "Field Guide to Western Birds' Nests" will be published in August. With the eastern guide, the two will cover the whole United States.

Ducks, Geese, and Swans of the World by Paul A. Johnsgard. 1978, University of Nebraska Press, 901 North 17th Street, Lincoln, Nebraska 68588, 404 pp., 59 color plates, 174 drawings, 132 maps, Price $35.00.

Paul A. Johnsgard, a noted authority on waterfowl, has attempted the impossible: to write a comprehensive, one volume survey of the world's waterfowl. The extent to which he succeeds is due to his impressive background in the study of these birds. He is the author of several books and numerous articles on the subject. "Ducks, Geese, and Swans of the World" covers 149 species with brief but comprehensive discussion of distribution of subspecies and range, weights and measurements, identification, field marks, voice, habitat, food preference, behavior, reproductive biology, population status, and evolutionary relationships. Also included for each

species are scientific and common names in various languages and a list of suggested readings. The introduction is an excellent discussion of taxonomy of the ten tribes of Anatidae.

The book has an attractive 8½ x 11 inch format and is illustrated by two or three fine line drawings per species by the author. There are also 59 color photographs of waterfowl, also by the author. Large, clear range maps are provided for each species as well. Finally there are an excellent bibliography, index and a glossary of technical terms including the derivations of vernacular names.

For the price this is the best survey of the world's waterfowl available. Most of the facts are here. The writing is economical yet easily understood. If one's interests are limited to North American species, Johnsgard's "Waterfowl of North America," Indiana University Press 1975, might be preferred. It is another good book containing more detailed discussions of our ducks, geese and swans.

Endangered Birds: Management Techniques for Preserving Threatened Species. Edited by Stanley A. Temple. 1978, University of Wisconsin Press, Box 1379, Madison, Wisconsin 53701, 446 pp. 31 plates, Price $9.50.

This book is a collection of 51 articles on the use of active management techniques to save endangered bird species. These techniques go beyond the more traditional techniques of protection and education, and involve manipulations of biology and behavior. Virtually every technique currently in use is discussed in this book, the result of a 1977 international symposium on the subject.

Some techniques covered include supplying extra, safe nest sites. This can be done by supplying boxes as in the case of Blue Birds and Puerto Rican Parrots, or by improving existing nest ledges or building artificial ones as is being done for Bald Ibises and Oilbirds. Another approach is protection from predators and parasites. For example, Cowbirds are removed from Kirtland's Warbler breeding areas and goats, rats, feral cats and dogs are removed from the small island habitats of some endangered species. Supplemental feeding of California Condor, Japanese Cranes and Swedish Sea Eagles is also discussed. Cross-fostering of Whooping Crane eggs to Sandhill Crane nests is the topic of one of several papers on manipulation of nesting biology. Other articles discuss captive breeding programs and alteration of nesting behavior. For example, Atlantic Puffins have been taken from Newfoundland, transported 1,600 Km to Eastern Egg Rock off Maine, and raised in artificial burrows. It is hoped that these Puffin will return to Egg Rock and establish a new nesting colony there. In order to encourage this altered behavior, Puffin decoys have been erected on the island.

Other interesting papers consider the genetic aspects of endangered species. What is the minimum number to which a population can sink before its decline becomes irreversible? In many species inbreeding causes serious loss of fertility. A final section reviews the methods used for reintroducing birds raised in captivity back into nature.

It would be the rare amateur who did not find something of interest in this book. Many are already actively involved in the projects discussed here. "Endangered Birds" is well edited, and although a little technical in places, certainly within the capacity of most of our readers to understand and enjoy. The bargain price of $9.50, when similar symposia are selling for $40 to $60 is very encouraging.

Rare and Endangered Biota of Florida. Vol. Two: Birds. edited by Herbert W. Kale 11. 1978 University Presses of Florida, 15 N.W. 15th Street, Gainesville, Florida 32603, 121 pp. 36 illus., Price $7.00.

This volume focuses on Florida's rare and endangered birds. Most of us are aware of

some of the conservation problems faced by Florida. From this book, we can learn a great deal more. We learn that colonial wading birds, after recovering from plume hunting to a population of about 1.5 million in the mid-1930s, have since declined to between 100,000 and 200,000 in 1974 due to alteration and destruction of wetlands. The Everglade Kite, numbered at slightly over 100 is endangered for the same reason, as is the Wood Stork, Florida's most endangered bird. This book is the work of the Florida Committee on Rare and Endangered Plants and Animals Special Committee on Birds and consultants, 26 distinguished scientists in all. The editor is to be congratulated for the consistent high quality of the product.

More than 75 species are discussed in one of five catagories: endangered, threatened, rare, species of special concern and status undetermined. Eleven are considered endangered; 12 threatened. Each description includes other names, identification, range, detailed habitat analysis, life history and ecology, specialized or unique characteristics, basis of status classification, recommendations for management, and slected references. Range maps and a black-and-white photograph for most species are included. Florida bird watchers must obtain this book. The authors urge amateurs to help them fill in the gaps in their knowledge and help monitor the endangered populations.

A.R. Buckelew, Jr., Editor

New Journal

Environmental Ethics: An Interdisciplinary Journal Dedicated to the Philosophical Aspects of Environmental Problems,
Spring, 1979, Volume 1, Number 1, Albuquerque, New Mexico

This new journal from the University of New Mexico is edited by Eugene C. Hargrove of that university's Philosophy Department and the John Muir Institute for Environmental Studies. If the first issue is any indication, the journal will make an excellent contribution to philosophical and social ethical debate about how we ought to relate to our natural environment.

The intention of the journal's editor is to air a variety of views, not all of which will be in agreement. It is also intended that the journal will be a vehicle for the establishment of an environmental ethics institute. These are commendable goals, and the support of the University of New Mexico, the American Conservation Association, and Chevron USA will help to insure a good start for the journal.

All but one of the contributors to this first issue are philosophers with special interest in science, technology, and the environment. The articles are varied and include useful reflections on the ethical implications of nature, the notion of irreplaceability, and the rights of nonhuman forms of existence. Discussion papers deal with wilderness boundaries, procreation, and environmental ethics itself, and there are two book reviews.

I was especially struck by Holmes Rolston's lead article which asks, "Can and Ought We to Follow Nature?" Rolston explores several possible ways of thinking through an answer to that question which are quite instructive for clarifying the relation between human values and natural structures and forces. With the confusion we often experience in discussing the meaning of what is "natural" about human behavior and culture, the distinctions and critique of opposing views that Rolston offers are most helpful.

Environmental Ethics is off to a good start in the difficult world of scholarly journalism. It deserves to succeed. Those who wish to subscribe should write The University of New Mexico, Department of Philosophy, Albuquerque, New Mexico 87131. Price $15.00.

William Daniel Cobb,
Dean of the Faculty
Bethany College
Bethany, West Virginia

A North American Directory To Bird Programs

A North American directory of programs available to amateur bird watchers is presently being organized at the Cornell Laboratory of Ornithology. The directory will appear as a major chapter in a coming book on bird watching to be published by Charles Scribner's Sons. The intent of the directory is to identify bird research and educational programs in the U.S. and Canada which welcome participation from non-professionals.

Examples of appropriate programs include research projects such as state atlas, breeding bird surveys, censuses of colonial water birds, surveys of particular species (such as declining species), hawk migration watches and organized nestbox projects for birds such as bluebirds. Ornithology courses for amateurs and museum study skin collections available to the public are appropriate entries. Local field trip programs will not be included.

Acceptable projects should have professional input into the organization of the project and should have an anticipated life of at least several years. Continent-wide programs such as Cornell's Nest Record Card Program and the Christmas Bird Count of the National Audubon Society have already been described and need not be duplicated at the local level.

If you know of an appropriate local or statewide program and want to include it in the directory, please obtain the appropriate forms by writing:

Dr. Stephen W. Kress
Cornell Laboratory of Ornithology
159 Sapsucker Woods Road
Ithaca, New York 14850