

Immature No. B231682	banded	August	6,	1933
	Return	1 on	May	8, 1934
	"	2 on	May	1, 1935
	"	3 on	April	30, 1936
	"	4 on	June	27, 1937

This bird was killed May 2, 1938, as it flew into a windowpane during severe electrical storm at night, a quarter mile southwest of banding station, almost back home but not quite all the way.

Immature No. 47-209742	banded	July	16,	1948
	Return	1 on	April	30, 1950
	"	2 on	May	11, 1951
	"	3 on	May	5, 1952
	"	4 on	April	27, 1953
	"	5 on	June	9, 1954
	"	6 on	May	8, 1956

Note that this bird was not taken during two years, 1949 and 1955; if it was present and not captured then it spent nine summers here.

AGE SUMMARY

105 Adults and . . .	38	Immatures	lived to be	2	years	of	age
34 " "	18	" "	" " "	3	" "	" "	" "
14 " "	9	" "	" " "	4	" "	" "	" "
8 " "	3	" "	" " "	5	" "	" "	" "
5 " "	1	" "	" " "	6	" "	" "	" "
1 " "	1	" "	" " "	7	" "	" "	" "
	1	" "	" " "	8	" "	" "	" "

We knew adults to be at least one year of age when banded and have so listed them in all of the records. It should be noted that many may have been older than this.

It should be kept in mind that many more returns and age records may be secured in the next few years before birds banded prior to the year 1957 will be written off the record books as time completes their life cycles.

131 North Whitehall Road, Norristown, Penna.

NEW DESCRIPTIONS OF NATAL PTERYLOSIS OF VARIOUS BIRD SPECIES

BY DAVID KENNETH WETHERBEE

The descriptions of natal down distribution presented in this paper supplement those compiled previously (Wetherbee, *Clark University Bull.*, **24**: 34.35, 1952; and *Bull. Amer. Mus. Nat. His.*, **113**: 339-436, 1957). These new descriptions were made from ideal material, artificially incubated, spontaneously hatched chicks. The data show that the previous descriptions, cited above, made with some misgivings from nestlings in nature were surprisingly representative—natural abrasion of neossoptiles in early postnatal life is negligible, even in the remarkable study skin preparations of natal passerines in the Royal

Ontario Museum of Ontario The majority of these new natal down descriptions are of species heretofore unexamined critically in this regard by ornithologists.

In 1956 Mr. Aretas A. Saunders published his journal notes on newly-hatched passerine birds (*Bird Banding*, 27: 121-128). Errors of omission and commission in Saunders' notes have already been noted (Wetherbee, 1952, *loc. cit.*). These notes Saunders had generously contributed to us in 1951 without our knowledge of his publication plans. His "patches" have the following equivalences in terminology: "dorsal patch": spinal region; "humeral patch": scapular region; "caudal patch": rectrices; "secondary and primary patches": secondary and primary coverts; "lateral patch": axillar and pectoral regions. Saunders' belief that ocular region down is limited to clamatorine birds is incorrect.

Dieter Burkhardt (*Revue Suisse de Zoologie*, 61: 551-633, 1954) published a major paper on "*embryonalen Pterylose einiger Nesthocker*" which brings up to date much information on chiefly Old World Species. Grateful acknowledgement is made to Dr. M. M. Nice for information volunteered.

Ruby-throated Hummingbird. *Archilochus colubris*. Although general reference works refer to hummingbirds as naked, they have in fact a rather heavy neossoptile growth at hatching on the mid-dorsal region. These downs were tawny, 4 mm. in length and numbered twelve pair on each of two specimens. The ephippial apterium that the downs enclosed was relatively long.

Belted Kingfisher. *Megaceryle alcyon*. Without natal down on six specimens examined.

Yellow-shafted Flicker. *Colaptes auratus*. Without natal down on ten specimens examined.

Downy Woodpecker. *Dendrocopos pubescens*. Without natal down on four specimens examined.

Great Crested Flycatcher. *Myiarchus crinitus*. To the fragmentary data given previously can be added 8 neossoptiles each on the greater and middle secondary coverts and a single adventitious down on the proximal secondary. The single specimen examined was noted to have a relatively long ephippial apterium.

Least Flycatcher. *Empidonax minimus*. The data given previously and thought incomplete proved to be fully representative by examination of two prime specimens.

Horned Lark. *Eremophila alpestris*. Neossoptiles had the following distribution on two specimens: ocular 9, coronal 14, occipital 9, mid-dorsal 9 (enclosing apterium), pelvic (entire) 7, scapular 10, femoral 12, abdominal 5, greater secondary covert 10, middle secondary covert 7, and carpal remex covert.

Tree Swallow. *Iridoprocne bicolor*. Fourteen additional specimens corroborated previously given averages. One specimen had a short adventitious neossoptile on the femoral region.

Bank swallow. *Riparia riparia*. Fifteen additional specimens corroborated previously given averages but boosted middorsal region average to 5 neossoptiles. Two specimens showed adventitious femoral neossoptiles. The scapular downs were usually at each end of that region.

Rough-winged Swallow. *Stelgidopteryx ruficollis*. Five additional specimens corroborated previously given averages. One specimen showed an adventitious femoral neossoptile.

Barn Swallow. *Hirundo rustica*. Twelve specimens showed the following average down distributions: coronal 8, occipital 5, middorsal 5, scapular 8, femoral 1. There were no rectrices.

Cliff Swallow. *Petrochelidon pyrrhonota*. Data from six specimens added the abdominal region (4 neossoptiles) to the natal pterylosis of this species, occurring as often as not. The secondary was not regularly downed. Down was sporadically absent from both scapular and femoral regions.

Common Crow. *Corvus brachyrhynchos*. Two specimens corroborated previous data. Five neossoptiles were found on the ocular region of one specimen.

Black-capped Chickadee. *Parus atricapillus*. Six specimens showed the following average neossoptile distributions: coronal 6, occipital 4, middorsal 4, and scapular 5.

Carolina Chickadee. *Parus carolinensis*. Three specimens showed the following average natal pterylosis: coronal 4, occipital 3, middorsal 3, and scapular 3.

White-breasted Nuthatch. *Sitta carolinensis*. Eight specimens showed average down distribution on the following regions: coronal 8, occipital 6, middorsal 6, and scapular 7. There was no ephippial apterium.

Dipper. *Cinclus mexicanus*. Dr. John H. Brandt of Durango, Colorado, kindly contributed a just-hatched Dipper that had long slatey-gray down on the following regions: coronal 14, occipital 8, middorsal 7, pelvic (upper) 2, and scapular 7. There was no ephippial apterium. The "saddle" was well forward, not situated caudal as in thrushes.

Bewick's Wren. *Thryomanes bewickii*. Neossoptiles on two specimens had the following distributions: coronal 4, occipital 4, middorsal 2, pelvic (upper) 1, and scapular 2.

Carolina Wren. *Thryothorus ludovicianus*. Two nearly hatched specimens had long black down on the following regions: coronal 4, occipital 4, middorsal 3, pelvic (upper) 2, and scapular 2.

Mockingbird. *Mimus polyglottos*. Five specimens showed the following average natal pterylosis: ocular 7, coronal 16, occipital 5, middorsal 9, pelvic 10, scapular 8, femoral 11, abdominal 12, crural 5, rectrices, greater secondary covert 9, and middle secondary covert 8.

Brown Thrasher. *Toxostoma rufum*. Three specimens from three nests showed the following down distributions: ocular 12, coronal 16, occipital 4, middorsal 11, pelvic 11, scapular 8, femoral 13, abdominal 8, crural 7, rectrices, under rectrix covert 2, secondary 1, greater secondary covert 9, middle secondary covert 8, carpal remex covert, and alular 1.

Robin. *Turdus migratorius*. Description previously given was substantiated. The upper pelvic region was downed as often as not. The biserial middorsal region extended much further posteriorly in this species than in most passerines.

Wood Thrush. *Hylocichla mustelina*. Five specimens from five nests showed the data previously given to be representative; one specimen, however, hatched with only coronal and occipital down.

Veery. *Hylocichla fuscescens*. Two specimens had the following neosoptiles: coronal 4, occipital 1, middorsal 6, pelvic (upper) 2, and scapular 2.

Blue-gray Gnatcatcher. *Polioptila caerulea*. Without neossoptiles on twelve specimens examined.

Cedar Waxwing. *Bombycilla cedrorum*. Without neossoptiles on three specimens examined.

Loggerhead Shrike. *Lanius ludovicianus*. One specimen showed five short white downs on the ventral abdominal region and on the secondary coverts and rectrices.

Black-capped Vireo. *Vireo atricapillus*. One specimen kindly contributed by Dr. Richard R. Graber was without neossoptiles.

White-eyed Vireo. *Vireo griseus*. Without neossoptiles on five specimens examined.

Bell's Vireo. *Vireo bellii*. One specimen kindly contributed by Dr. Richard R. Graber was without neossoptiles.

Red-eyed Vireo. *Vireo olivaceus*. Four specimens substantiated data previously given with the addition of adventitious presence of neossoptiles on the pectoral and post auricular regions and carpal remex covert. The middorsal region was flared like that of a swallow, sometimes with irregularly situated neossoptiles lateral to the uniserial row. The pelvic region downs were confined to the posterior part.

Philadelphia Vireo. *Vireo philadelphicus*. One specimen had the following neossoptiles: ocular 4, coronal 8, occipital 4, middorsal 13 (7 along ephippial apterium and 6 lateral to this row), pelvic (lower) 6, scapular 12, femoral 10, pectoral 1, axillar 4, abdominal 19, crural 4, rectrices, secondary 3, greater secondary covert 8, middle secondary covert 10, and carpal remex covert.

Warbling Vireo. *Vireo gilvus*. One specimen had the following white neossoptiles: coronal 10, occipital 3, middorsal (flared) 6, pelvic (upper) 1, (lower) 4, scapular 14, femoral 8, abdominal 15, crural 2, rectrices, secondary (proximal) 4, greater secondary covert 8, and middle secondary covert 8.

Black-and-white Warbler. *Mniotilta varia*. One specimen showed heavy brown neossoptiles with the following distribution: coronal 10, occipital 4, middorsal 3, pelvic (upper) 1, scapular 6, femoral 6, and greater secondary covert 3.

Prairie Warbler. *Dendroica discolor*. Two specimens had the following average down distribution: coronal 8, occipital 4, middorsal 2, pelvic (upper) 2, (lower) 2, scapular 6, femoral 7, abdominal 4, crural 1, rectrices, greater secondary covert 5, and middle secondary covert 4.

Yellowthroat. *Geothlypis trichas*. Four specimens from four nests showed the following average natal pterylosis: coronal 4, occipital 4, middorsal 2, pelvic (upper) 2, and scapular 4.

Yellow-breasted Chat. *Icteria virens*. Dr. Richard R. Graber kindly contributed one specimen that was without neossoptiles.

Baltimore Oriole. *Icterus galbula*. Two specimens showed the following average neossoptile distribution: coronal 16, occipital 6, spinal 37, scapular 11, femoral 14, abdominal 14, crural 10, rectrices, under rectrix covert 1, primary 5, greater primary covert 7, secondary

3, greater secondary covert 10, middle secondary covert 8, lesser secondary covert 3, carpal remex covert, and alular 3.

Brown-headed Cowbird. *Molothrus ater*. Examination of five specimens failed to show the secondary region neossoptile that was previously thought to be diagnostic in this species.

Scarlet Tanager. *Piranga olivacea*. Two specimens had neossoptiles distributed as follows: coronal 13, occipital 4, spinal 35, scapular 9, femoral 13, abdominal 12, crural 7, rectrices, primary 10, greater primary covert 8, secondary 2, greater secondary covert 9, middle secondary covert 8, and carpal remex covert.

Cardinal. *Richmondia cardinalis*. One specimen had the following natal pterylosis: coronal 6, occipital 4, middorsal 6, pelvic 9, scapular 8, femoral 8, greater secondary covert 7, middle secondary covert 6.

Rose-breasted Grosbeak. *Pheucticus ludovicianus*. Three specimens had the following average natal pterylosis: coronal 14, occipital 5, spinal 30, scapular 7, femoral 16, abdominal 14, crural 4, rectrices, secondary 2, greater secondary covert 10, middle secondary covert 8, and carpal remex covert.

Lark Sparrow. *Chondestes grammacus*. One specimen kindly contributed by Dr. Richard R. Graber had the following distribution of neossoptiles: ocular 2, coronal 11, occipital 5, middorsal 6, pelvic 12, scapular 8, femoral 13, abdominal 12, crural 7, rectrices, greater primary covert 6, greater secondary covert 9, and middle secondary covert 7.

Field Sparrow. *Spizella pusilla*. Three specimens corroborated previously given data. The crural downs, numbering 2, and the lower pelvic downs, numbering 6, were present characteristically.

Swamp Sparrow. *Melospiza georgiana*. Seven specimens had the following average natal pterylosis: coronal 9, occipital 4, middorsal 6, pelvic (upper) 1, (lower) 6, scapular 5, femoral 8, abdominal 3, and greater secondary covert 7. Adventitiously there were three neossoptiles on the posterior ocular region, two on the proximal secondaries, and two on the distal middle secondary coverts.

Department of Zoology and Entomology, University of Connecticut, Storrs, Connecticut.

A NEW WATERFOWL NEST TRAP¹

BY MALCOLM W. COULTER

Special studies of territorial behavior, reneesting activities, homing, and other aspects of waterfowl biology sometimes require that nesting females be marked to permit future identification. Some of the traps and techniques used to capture nesting hens were reviewed by Dzubin

¹Contribution from the Maine Cooperative Wildlife Research Unit, Orono, Maine; Maine Department of Inland Fisheries and Game, University of Maine, Wildlife Management Institute; and the U. S. Fish and Wildlife Service cooperating. The author expresses his appreciation to Warden Erwin Bonney, Maine Department of Inland Fisheries and Game, to William Miller and Neil King, Vermont Fish and Game Service, for suggestions concerning modification of the original trap, to Howard L. Mendall, Leader, Maine Cooperative Wildlife Research Unit, for reviewing the manuscript, and to Claude Westfall, University of Maine, for the drawing.