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Local Distribution and
Ecology of the Birds
Of Southern Illinois

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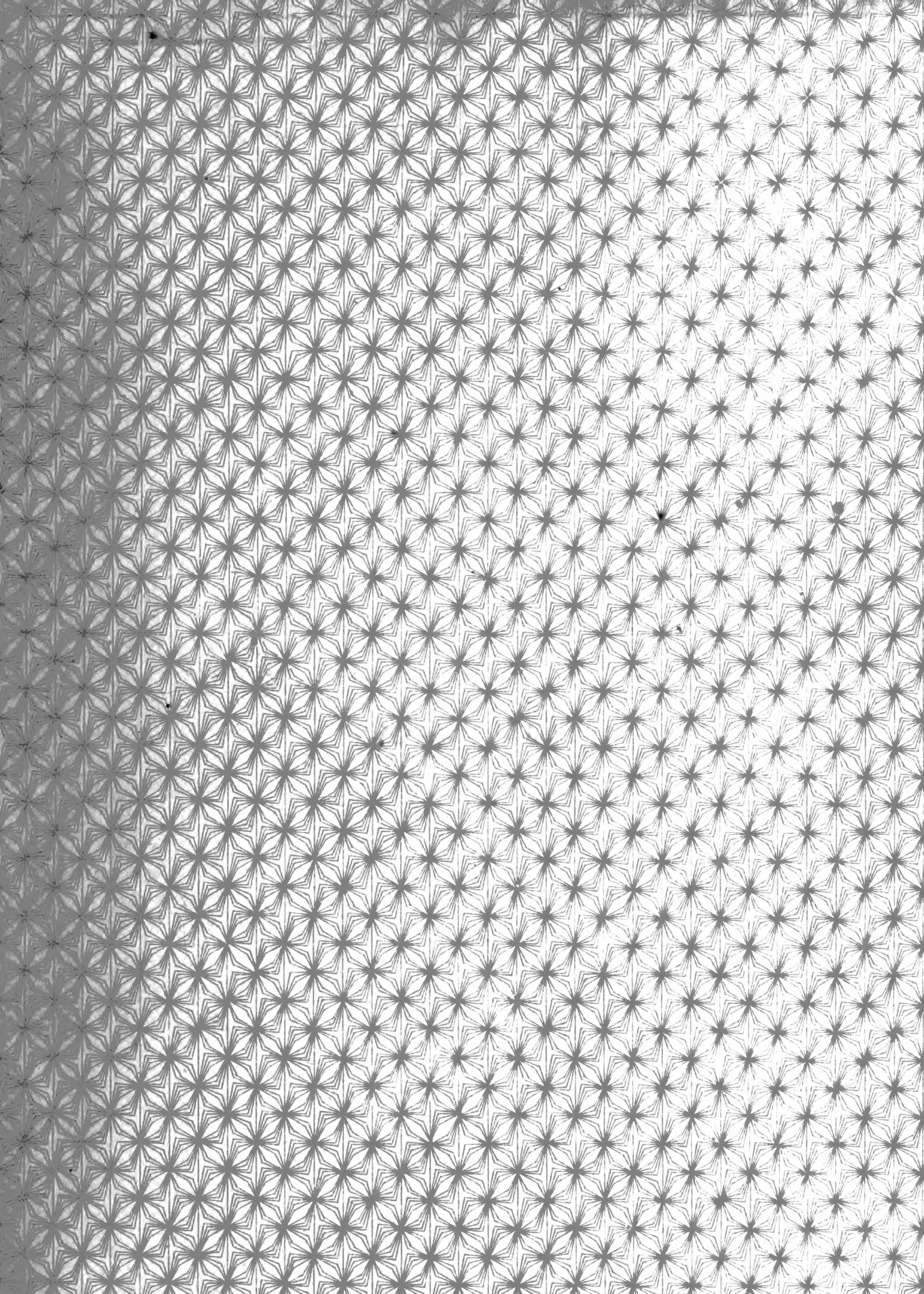
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**LOCAL DISTRIBUTION AND ECOLOGY OF THE
BIRDS OF SOUTHERN ILLINOIS**

BY

ALFRED OTTO GROSS

THESIS

FOR THE

DEGREE OF BACHELOR OF ARTS

IN

ZOOLOGY

IN THE

COLLEGE OF SCIENCE

OF THE

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THIS IS TO CERTIFY THAT THE THESIS PREPARED UNDER MY SUPERVISION BY

Mr. Alfred Otto Gross

ENTITLED Local Distribution and Ecology of the Birds of

Southern Illinois

IS APPROVED BY ME AS FULFILLING THIS PART OF THE REQUIREMENTS FOR THE

DEGREE OF Bachelor of Arts in Zoology

S. A. Forbes

Instructor in Charge.

APPROVED:

S. A. Forbes

HEAD OF DEPARTMENT OF Zoology.

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I N T R O D U C T I O N

Acknowledgments are due to Professor S. A. Forbes who has offered many helpful suggestions and has made innumerable corrections in my preliminary manuscript. I am especially indebted to him also for permission to use in this thesis many data obtained in the course of my service as a field ornithologist on the staff of the State Laboratory of Natural History.

The notes and data of this discussion were collected by Mr. Howard A. Ray and myself while making statistical observations on the birds of Illinois, for the State Laboratory, under the direction of Professor Forbes. Although a bird census was the primary object of these observations, we were given many opportunities to see interesting incidents in the life of the birds and to make notes of situations which could not be studied in a statistical way because of the character of the vegetation. It is the purpose of this paper to supplement the data reported to Professor Forbes for his discussion and to emphasize those species which were seen in the forests and which seldom if ever appeared on the bird census reports. The southern part of the state was selected for this purpose because of the predominance there of forests, cypress swamps, large river courses, and broken country, all of them areas on which the birds could not be accurately counted, but which offered most interesting conditions to the field ornithologist. The nature of our work required us to avoid, rather than



seek, such situations, but a continuous journey across that section of the state was bound to lead us into a great diversity of conditions. This constantly changing scene was indeed a fascinating panorama and gave us an excellent opportunity to study the birds from a general ecological standpoint.

The ecology of a limited area is influenced by many local conditions which are liable to give wrong impressions of the relations of certain species. For instance, a preliminary bird census of the University farm, made at Urbana in 1905, gives us a misleading idea of the relative importance of the bronzed grackle population during the fall and for the state at large because of the presence of a large blackbird roost at no great distance from this farm. The red-winged blackbird usually frequents swamps and marshes and there builds its nest in the weeds, several inches above ground, but in localities where there are no swamps, it builds on the ground in timothy or grain fields - a great change of nesting habit secured by difference of local environment. By summing up all the various conditions and relations derivable from a large area, we can gain a truer conception of the life of the species, as well as a truer view of the bird population taken as a whole. My annotated list of species is necessarily very incomplete, since a limited part of one year was devoted to southern Illinois, and especially since no records were made there during the height of the spring and fall migration.

By southern Illinois we mean generally that part of the state south of the northern boundaries of Crawford, Jasper, Eggingham, Fayette, Bond, and Madison counties. Although this list is limited to the species recorded in that section, frequent

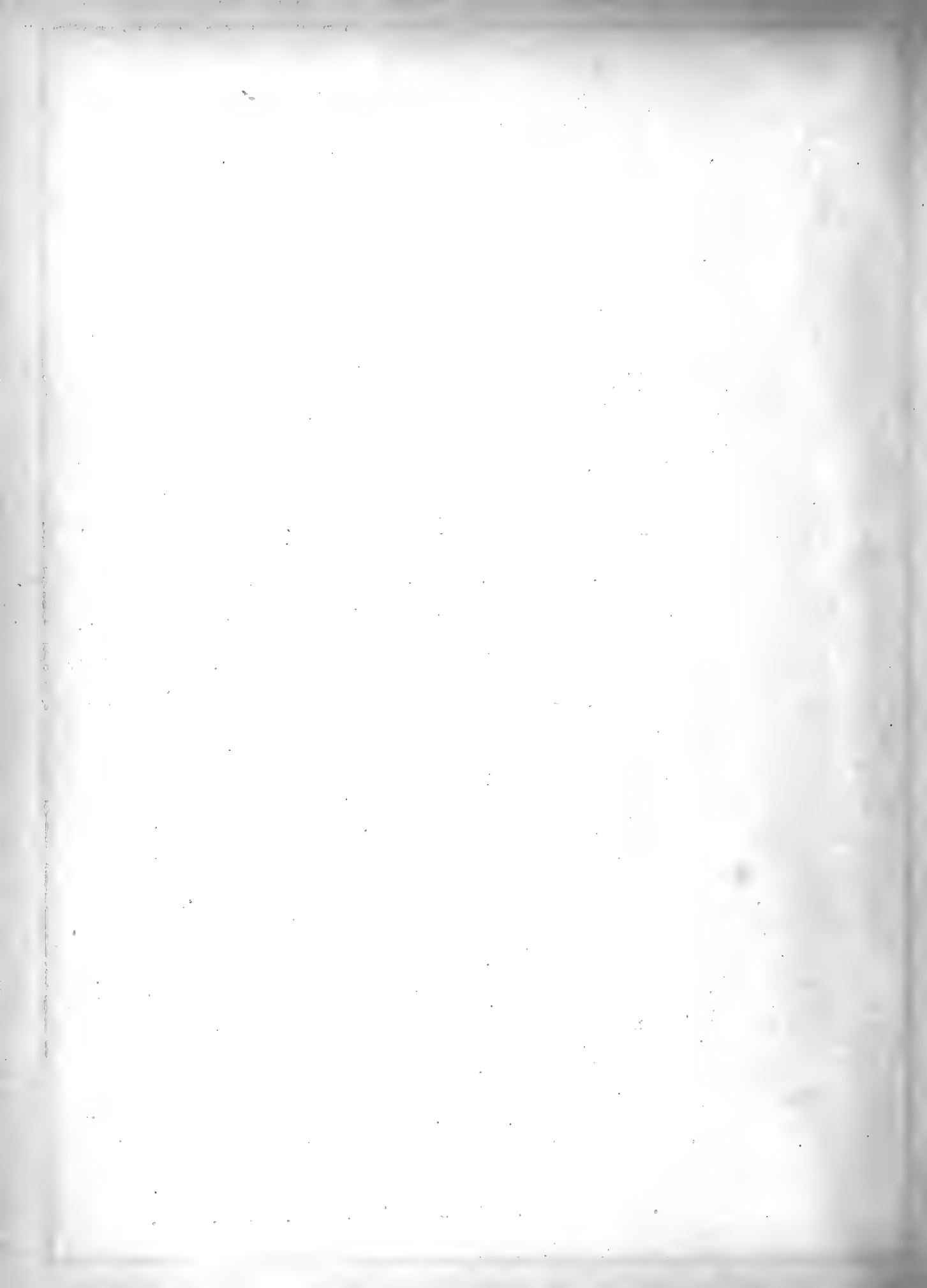
references are made to records and material obtained during the same year, in central and northern Illinois.

METHOD AND EQUIPMENT

The prescribed method of the bird census required us to traverse the state in various directions, traveling always in straight lines and always thirty yards apart, and noting and recording the species, numbers, and exact situation of all birds flushed by us on a strip fifty yards in width, including also those crossing this strip within one hundred yards to our front¹.

Our usual equipment consisted of two prism binocular field glasses, a sixteen-gauge shotgun and ammunition, a heavy leather knapsack, a passimeter, compass, maps, data-sheets, and clothing adapted to the various conditions of weather throughout the year. Our winter equipment and apparel are shown on plate L. The field glasses were of the very best that could be obtained. They were absolutely essential to accurate field work on birds. The gun was carried for the purpose of collecting rare specimens, or those birds we failed to recognize in the field. The skins were preserved and are now in the museum of the University of Illinois at Urbana. The knapsack was used to carry miscellaneous articles from maps to preserved birds, and in certain parts of the state where prospects of a dinner were poor, it served as a lunch box. The passimeter is an instrument about the size of a watch, used to ascertain the distances traveled. It records the number of steps, the length of which is determined by repeated tests on known distances. A mechanical tally was used on very rough surfaces, or

¹Forbes Bul. Ill. State Lab. of N. H. '07, vol. 7, p. 307.



in winter when the ground was icy - conditions under which the passimeter failed to register correctly. Constant use was made of the maps and compass, especially in densely timbered country, to keep our general direction and to determine our line of march. During the latter half of the year we carried two cameras, one 3 1/4 X 4 1/4, and another 4 X 5, screen focus, which, although increasing the weight and bulk of our pack, added much to the interest of the trips and later proved useful in illustrating the haunts and nests of birds.

In addition to the above equipment we used for our supplies and permanent records, a trunk which was expressed ahead of us from week to week.

ITINERARY

The following is a chronological list of the trips made in southern Illinois:- Cairo, Alexander County, to Pana, Christian County, October 31 to November 16, 1906; Thebes, Alexander County, to Eldorado, Saline County, February 6 to 21, 1907; Robinson, Crawford County, to Brownsville, White County, April 5 to 11, 1907; radiating trips from Benton, Franklin County, and from Du Quoin, Perry County, June 4 to 23, 1907; Metropolis, Massac County, to Cave-in-Rock, Hardin County, June 25 to July 1, 1907; and a personal trip to Grand Tower, Jackson County and Running Lake, Union County, December 23 to 28, 1907, and to Olive Branch, Alexander County, December 31, 1907, to January 3, 1908.

Cairo to Pana trip.

From Cairo we followed the Ohio River levee to Mound City and from there we went to Villa Ridge. We then continued

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northward from Villa Ridge to Carbondale, Jackson County, following the course of the Illinois Central and keeping at least within a mile of that road. Then going by rail to Ashley, Washington County, we continued on foot, November 9, from the latter place to Pana, Christian County, following the Illinois Central as before.

When we started from Cairo, the migration was practically over for most of the birds, and such winter residents as the junco had made their appearance. There were, however, many birds present, especially of the gregarious species, which were congregating in preparation for their final departure to the south. The weather during the first week was usually fair, and was very warm during the day but cool at night. During the latter part of this trip it was considerably colder, and we encountered one heavy snow storm.

Thebes to Eldorado trip.

From Thebes we crossed the hills of Alexander County to Sandusky, but, being unable to cross the flooded Cache River, at that point, we turned northward to Ullin and then south to Pulaski. From Pulaski we went across country to Grand Chain, and thence southeast to Baccus Landing on the Ohio in Massac County. At this point conditions forced us to continue via steamboat to Metropolis. We made a trip to Brookport and return February 11. The next day we followed the course of the Illinois Central railroad to Reevesville, Johnson County, going east from there to Golconda, Pope County. Leaving Golconda, February 18, we continued northward through the Eagle mountains to Eldorado, Saline County. This was perhaps the most interesting of our journey through southern Illinois. The winter of 1906 and 1907 was

unusually mild and certain birds were probably more abundant there than usual. When we left Thebes, there was an inch of snow on the ground and the air was crisp and cold. It soon moderated, however, to such a degree that we were very comfortable without our winter coats. During the latter part of the trip it again grew colder and several inches of snow fell on February 21.

Robinson to Brownsville trip.

This short trip was the southern section of one begun at Harvey, Cook County, March 26. ~~It~~ That from Robinson to Lawrenceville was made April 5, and on the following day, we went to Brookport and returned. We then followed the general direction of the Big Four Railroad from Lawrenceville to St. Francisville, from Mount Carmel to Grayville, and from Carmi to Brownsville in White County. The weather during the greater part of the trips was very cold and the wind was sharp and icy, the spring being very late - conditions greatly in contrast with those of our previous visit to southern Illinois. The bird migration was correspondingly delayed, and comparatively few of the migrants due at this time were seen. The condition and advancement of the trees and other vegetation are shown by figures 1 and 2, plate XXXIII.

Benton and DuQuoin trips.

A different plan was adopted for the summer work and instead of making continuous journeys from one part of the state to another we established ourselves first at Benton and then at DuQuoin, radiating outward from each of these points as a center. The following trips were made from Benton, Franklin County: Benton to Galatia, then southeast through Harrisburg to the Eagle mountains, and from there north to Eldorado; Benton south to Hudgens, Williamson County; and Benton north to Mount Vernon, then east to

Bluford, Jefferson County. We also made a few short trips in the immediate vicinity of Benton. The following trips were made from DuQuoin, Perry County: DuQuoin to DuBois, Washington County, and back to Tamaroa, thence southwest to Pickneyville and from there to DuQuoin; DuQuoin to Christopher, Franklin County, and DuQuoin south to Desoto, Jackson County.

Metropolis to Cave-in-Rock trip.

From Metropolis we traveled northeast to Golconda, going through the villages of Rosebud and Homburg. From Golconda we continued along the Ohio River to Cave-in-Rock. The weather was excessively warm and there was but little rain during this trip. The conditions of the vegetation and the advancement of the crops are shown by the series of landscape views taken at various points along the route.

Grand Tower, Running Lake, and Olive Branch trip.

This was a personal trip made to determine, as accurately as possible, the bird life of the Mississippi bottomlands and the cypress swamps during the winter and to supplement the winter records made the previous year, February 6 to 21, 1907. Special attention was paid to the forests and but little time was spent in the open or cultivated fields. December 26 to 28, inclusive was spent with a hunting party encamped near Running Lake, Union County (Figure 2, plate XXXVIII.) - an ideal place for game and for many other kinds of birds. At Olive Branch most of the time was devoted to a study of the cypress swamps in the vicinity of Horse-shoe Lake (Figures 1 and 2, plate XXXVII, and figures 1 and 2, plate XXXIX.). This winter was also a very temperate one, and

the weather during my visits to those places was unusually warm for the season. This fact must of course be taken into account for it is doubtful that the phoebe, hermit thrush, brown thrasher, Grinnel's water-thrush, yellow-bellied sapsucker, and some others, are commonly present in Illinois during the winter months.

These trips to southern Illinois were made through regions representing typical conditions of topography and vegetation, and the birds recorded form a typical list of species for that part of the state. Our method of study was not such as to give us a long list, however, as places favorable to bird life were given no larger proportion of our time and attention than the open and more extensive areas of cultivated fields, where birds were represented by only a few characteristic species. I have recorded more species from a single small tract of woods near Urbana during the spring migrations than were seen by us during all the time spent in southern Illinois. In so limited an area, however, ecological relationships cannot be studied to so good advantage as by more extended travel over a larger district.

ANNOTATED LIST

51. *Larus argentatus* (Brünn). Herring Gull.

Five herring gulls were seen February 9 flying over the Ohio River at Baccus Landing, Massac County. Several other gulls were noticed flying along the opposite side of the stream, but were too far away for positive identification.

132. *Anas boschas* (Linn.). Mallard.

Mallards were common at Running Lake, Union County, December 26 to 28, 1907. They were usually seen from seven till nine in the morning, feeding on the acorns and bulbs at the margin of the lake, in places such as are illustrated by figure 2, plate XXXVIII. On the morning of December 27, a flock of eighteen flew over, almost within gunshot of our tent, and on January 1, 1908, I saw five on Horse-shoe Lake, Alexander County.

149. *Aythya affinis* (Eyt). Lesser Scaup Duck.

The little blue-bill, as the hunters call the lesser scaup duck, was reported common along the Mississippi bottoms at Grand Tower, and at Horse-shoe Lake in Alexander County. I saw one small flock while returning to Grand Tower late one afternoon, and probably some of those flying too high for positive recognition were of this species.

172. *Branta canadensis* (Linn.). Canada Goose.

Several flocks of Canada geese were seen, February 9 to 17, at various points between Yates Landing and Golconda. A flock of ten was flushed south of Grand Tower December 23, 1907, from a fringe of willows bordering the bank of the Mississippi River.

During the preceding week several were killed on sand bars about Sandy Island, where they were easy victims for the hunters, who concealed themselves in pits dug in the sand. On the evening of December 31, an immense flock of fifty eight was seen at Horse-shoe Lake. (Figure 1, Plate XXXVII.). Several smaller flocks were noticed flying over at this lake and in the vicinity of Olive Branch.

A few farmers in southern Illinois complained of serious damage done by the Canada geese to the winter wheat, especially in fields in the lowlands and along the Ohio River.

194. *Ardea herodias* (Linn.). Great Blue Heron.

The great blue heron is local throughout Illinois, but most abundant in the bottomlands of the larger rivers, and in the cypress swamps beside the smaller streams and lakes. Figure 1, plate XXXII, illustrates the conditions of the Ohio River bottoms above Metropolis during our visit there June 25, 1907. The great blue heron was found here, and, although it may not nest in the vicinity, a place of this nature affords good feeding grounds, and probably attracts the herons for many miles. A colony of these giant birds was discovered June 26 in a small cypress swamp along Big Bay Creek, near Homberg, Pope County. When first seen two of them were perched in the dead tops of tall trees and were very conspicuous from a considerable distance. Although they were seemingly unaware of our approach, we were unable, by the most careful maneuvers, to get within camera or gunshot of them. In passing through the swamp we saw no nests of this heron, but no doubt a more thorough search along the stream would have revealed them, for the surroundings were ideal for a rookery. Mr. E. W. Nelson in his notes upon birds observed in southern Illinois in 1875¹ mentions a

¹Bul. Essex Institute '77, vol. 9 pp. 32-65.



rookery in a cypress swamp near ¹¹Mount Carmel, with nests in the tops of tall sycamores, - one tree containing as many as nine nests.

201. *Butorides virescens* (Linn.). Green Heron.

About ten green herons were seen in southern Illinois during the month of June. The majority of these were in places remote from streams or large bodies of water, in situations not attractive to most of our herons. June 20, two were flushed from the vegetation seen in the foreground of figure 1, plate XXXI, but this place was probably a feeding ground merely and not a nesting resort. No nests were found in southern Illinois, but I have seen many in the central part of the state, commonly at some distance from the water courses. In Piatt County, near Atwood, a small colony nested regularly for many years in a grove of box elders only a few rods from my father's farmhouse where they were never disturbed.

228. *Philohela minor* (Gmel.). American Woodcock.

A woodcock was seen November 6 in an old, deserted orchard about three miles northwest of Cobden, Union County - the only one we saw in southern Illinois.

230. *Gallinago delicata* (Ord). Wilson's Snipe.

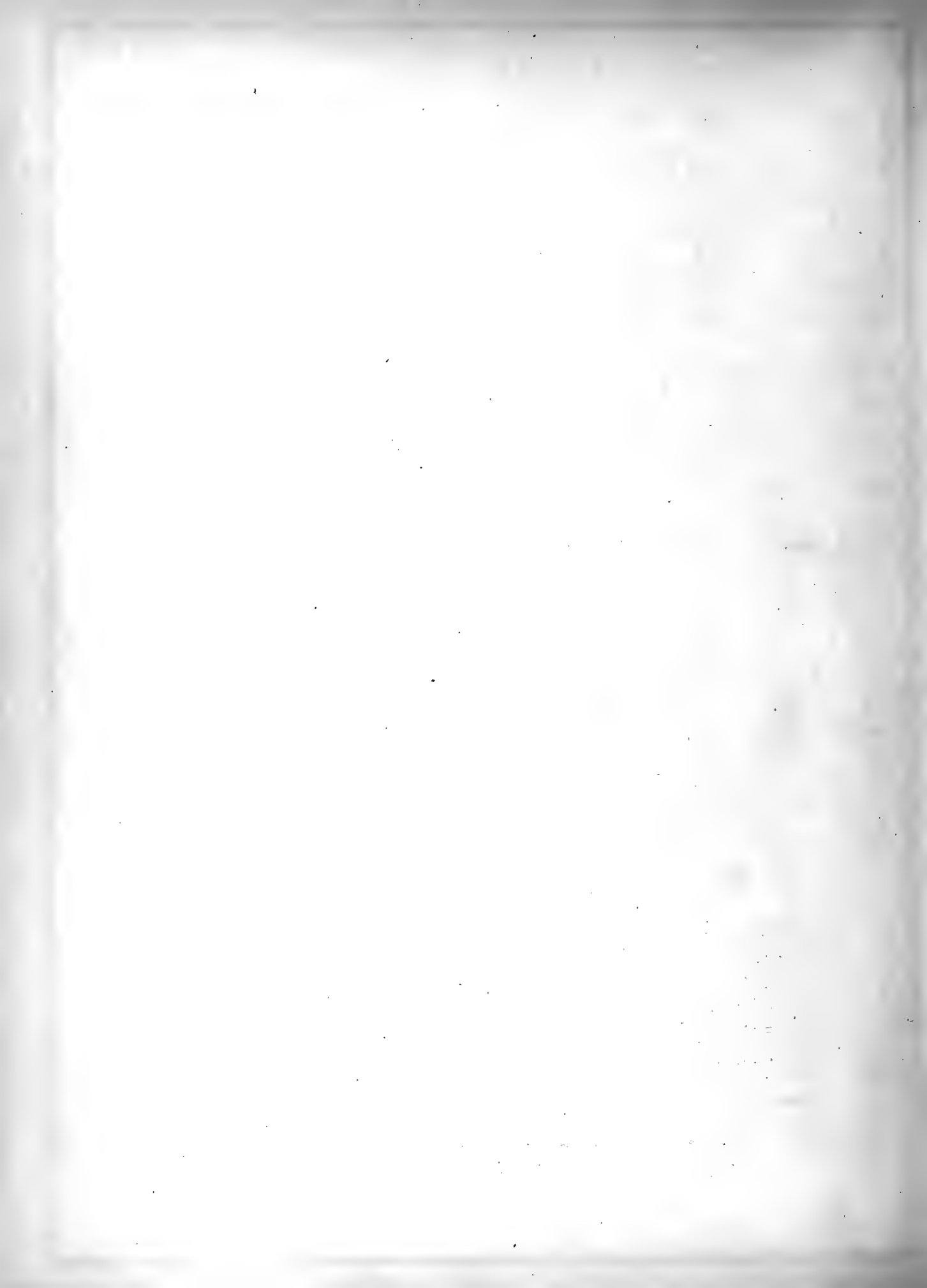
We found Wilson's snipe to be very common during the trip from Harvey, Cook County, to Brownsville in the lower Wabash valley, March 26-April 10, 1907. It was especially abundant in the low, wet, cultivated fields where the soft, water-soaked places offered little resistance to their long, sensitive bills. Not less than seventy of these birds were flushed March 26 from a cornfield about five miles south of Harvey. It was the afternoon of a typical spring day, warm and cloudy, with occasional threatening showers and thunder storms. There was but little vegetation on the field, excepting the old cornstalks and scanty growth of dead weeds and grass.



Small parts of it were submerged,¹² and the exposed places were very soft. In this black, mucky soil, were innumerable small holes made by the snipe in their search for food. These birds were not congregated in one large flock, but were scattered over a comparatively wide area in the field. As we walked along, only a few were flushed at a time, and their flight did not seem to disturb those farther in advance. Many were found in the low open fields, and pastures of the Wabash valley, but nowhere so numerous as in the cornfield south of Harvey. No Wilson's snipe were seen in southern Illinois during the winter and summer visits.

261. *Bartramia longicauda* (Bechst.). Bartramian Sandpiper.

During the month June 4 to July 1, about fifteen Bartramian sandpipers were seen distributed widely over the territory visited. Of these, the majority were in corn and small grain fields while only one was seen in a pasture, and none in meadows, - places often frequented by these sandpipers during the spring. In most cases they were probably nesting in the field in which they were found. At times they displayed the most reckless bravery when attempting to lead us from their nesting grounds. One was flushed June 18 from a ripening wheat field north of Tamaroa, Perry County. This bird uttered her sharp, penetrating notes as she arose in the air to join her mate, but instead of flying away the pair swept in circles about our heads, sometimes alighting, seemingly helpless, in the tall wheat a few yards from us. The shell of a Bartramian sandpiper's egg was found in a bare place in the wheat field and the recently hatched young was apparently present, as the parents continued their peculiar antics, preceding us until we were at least a quarter of a mile from the point where they were first seen.



262. *Tryngites subruficollis* (Vieill.). Buff-breasted Sandpiper.

On a trip from Harvey to Brownsville, March 26 to April 11, several flocks of sandpipers, probably the buff-breasted, were seen in the open fields. April 5, 1907, we had an excellent opportunity for observing a flock of twenty five while they were feeding in a closely grazed pasture two miles south of Robinson, Crawford County. Although we were unable to secure any specimens, we could by the use of excellent prism glasses be reasonably certain of their identification. The birds were very active and flew in a compact mass wheeling and circling, now rising, now dipping with wonderful precision. The perfect unity maintained by the flock during its rapid erratic flight astonished us and aroused our admiration.

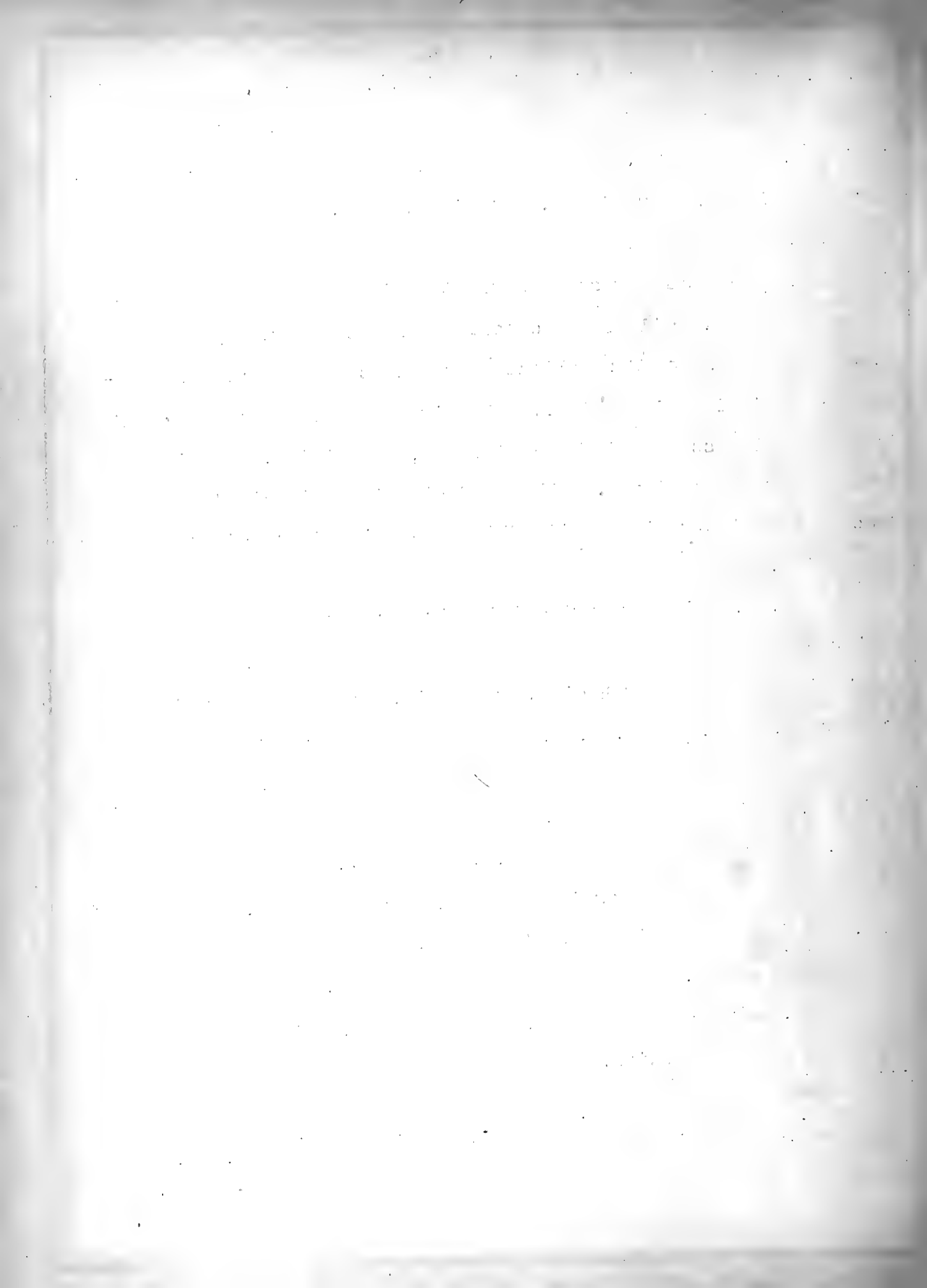
E. W. Nelson reported this bird as a rare migrant in north-eastern Illinois¹ and discredited the statement of Dr. Hoy that it was "quite common" near Racine, Wisconsin, from September 15 to October 10, 1873. Dr. A. K. Fisher shot numbers of the species and saw hundreds of them on a dry prairie at Maywood, Cook County, Illinois, during August 1874².

273. *Oxyechus vociferus* (Linn.). Killdeer.

The killdeer is a permanent resident of southern Illinois, but it was not abundant at any time during our visits to that part of the state. Five were seen February 13 feeding about a small pond, north of Round Knob, Massac County, but no others were noticed during the winter. About twenty five were found June 4 to

¹Bul. Essex Institute '77, vol. 8, p. 130.

²Cook.- Bird Migration in the Mississippi Valley, p. 97.



July 1, widely distributed, usually on plowed ground and in corn-fields. The corn at this time ranged from a few inches to about two feet in height. The actions and cries of some of these birds when flushed, gave evidence of their nesting, but no nests or eggs were discovered.

289. *Colinus virginianus* (Linn.). Bob-white, quail.

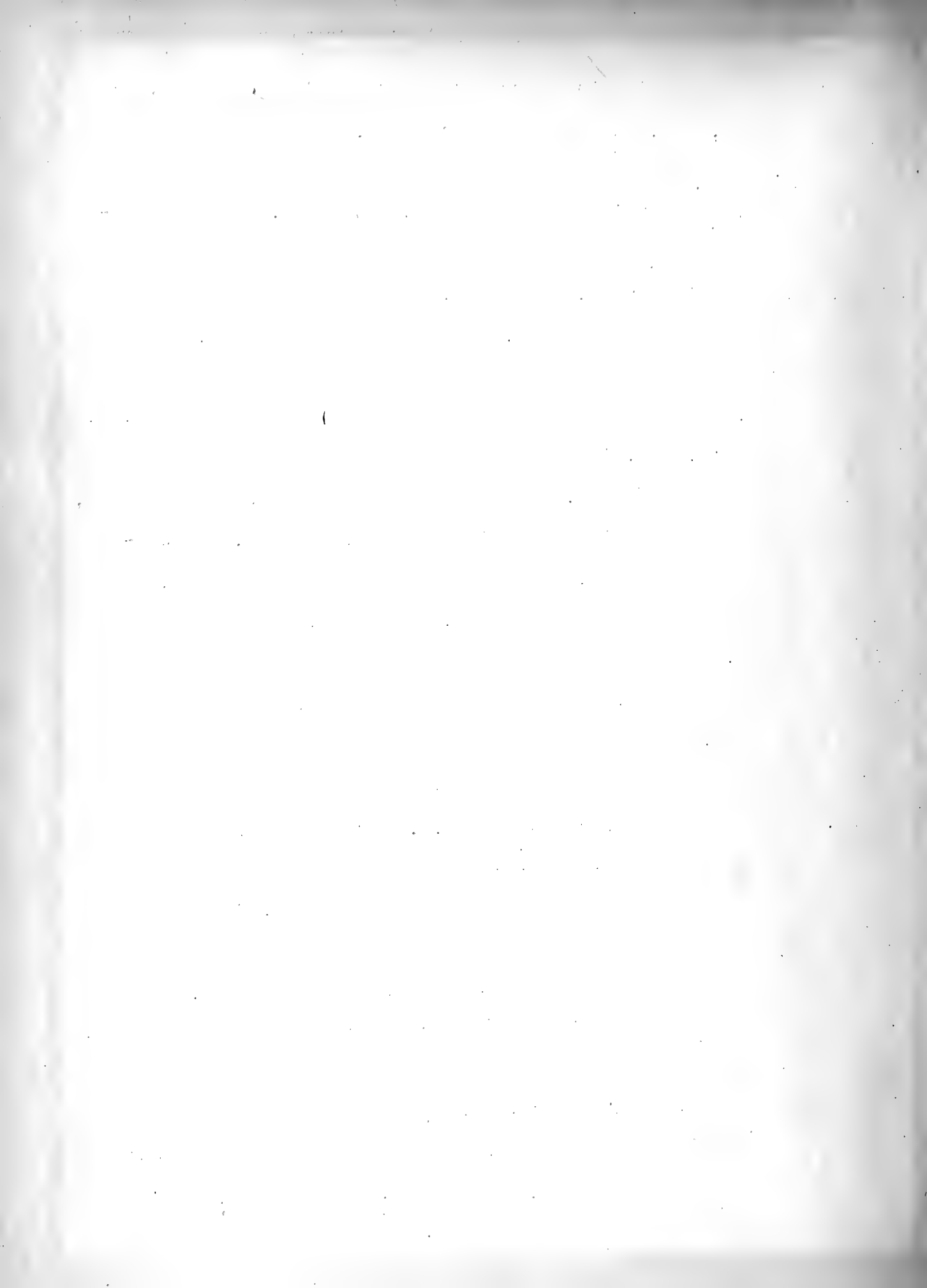
The quail is the most abundant and important of the game birds of southern Illinois. It is eagerly sought by scores of hunters who visit this part of the state during the open season. Most of the sportsmen are kept within bounds by the game laws which greatly check the destruction of the quail, and the farmers, by their general prohibition of hunting on their farms, do much to prevent a wholesale slaughter of these valuable birds.

In fall and winter, the quail were usually found in flocks numbering from three or four to thirty birds. Fields of corn stalks and stubble were their favorite resorts, although covies were flushed from almost every kind of surface where there was good protection, or a plentiful food supply. In winter they usually resorted, for protection against the cold winds, to denser vegetation and to the shrubbery of valleys and ravines. In the breeding season the remnants of the surviving flocks were widely scattered, and we never found more than one pair nesting in a single field. Pastures and meadows were the favorite nesting places. The nests were always on the ground among low, dense vegetation such as timothy grass, or weeds, and none were seen among shrubbery or in the woods. Figures 1-2, plate II, are photographs of a typical nest discovered in a timothy field south of Bois in Washington County. This nest was almost wholly of grass shaped into a dome with the entrance at one side. The sun had so dried and bleached the structure that it

contrasted strongly with the surrounding green of the timothy. The eggs were fresh, and, as there were only six, the set was probably incomplete. Neither of the parent birds were present, another reason for believing that incubation had not yet begun. The remarkable nest illustrated in figure 1, plate I, was found June 22 east of Benton, Franklin County, in a tall, rank growth of grass and weeds at the edge of a cornfield. It was well concealed, being roofed over by the surrounding vegetation interwoven with a little plucked grass. The weeds and grass stood erect about the nest, hiding it completely, and, if the female had not flown, it no doubt would never have been found. There were sixteen eggs in this nest, all of which can be distinguished in figure 2, plate I, a photograph taken at close range. The eggs of the quail are white, but they are usually stained a dull brown, or yellow, by the grass upon which they lie. These stains and grass marks show very plainly on the eggs in the picture. A nest containing twelve eggs was found in a wheat field. This nest had no roof, but the dense foliage of a dewberry vine served as a protection.

305. *Tympanuchus americanus* (Reich.). Prairie Hen.

November 12, 1906, sixteen prairie hens were flushed from a corn field about two miles north of Centralia. Another was seen near Sandoval, Marion County; and, on the following day, still another in a corn field south of Shobonier, Fayette County. April 5, 1907, a magnificent specimen was started from a field in the Wabash Valley, near Robinson, Crawford County. The above observations were made north of the 38th parallel, and not a prairie hen was found by us south of that latitude. The considerable expanse of forest lands and the scarcity of extensive open pastures, render



the extreme southern part of the state less attractive to the prairie hen, than central and northern Illinois in which this bird is not at all uncommon. Traveling in the early mornings of springtime, we often heard its booming from some neighboring or distant field and several times we were startled by the whirr of wings as a prairie hen arose from concealment nearby. A flock of fifty two was flushed from a stubblefield South of Rockford, in extreme northern Illinois,- a magnificent sight seldom seen in this state at the present day. A flock of this size would soon be destroyed, however, were it not for the persistent and co-operative efforts of the farmers and game wardens in that part of the state. It is evident that our stringent game laws are doing much to protect this species which has been in danger of extermination. May 16, 1907, a prairie hen's nest containing nine eggs was found in a large timothy field three miles east of Clinton, Illinois. This nest, which is well illustrated by the figures 1 and 2, plate III, was placed in a rank growth of grass on the side of a gradually rising knoll. In its construction but very little material was added to the dried grass already present. No dome covered it, as in the case of the nest of the Meadowlark or of the quail, but grass growing around the margin bent inwards and formed a natural concealment which served the purpose so well that the nest could not be seen at a distance of two or three yards.

Phasianus torquatus (Gmel.). Ring-necked Pheasant.

The ring-necked pheasants have apparently been successfully introduced into certain parts of southern Illinois. Mr. E. Clark of Golconda liberated numbers of them on his large estate in Pope County, the greater part of which consists of timbered hills and ravines affording an excellent protection and a place where these

birds will thrive if left unmolested. We saw none, but obtained reliable information, from hunters and farmers, of their presence in Hardin and Saline counties, where they were said to be common in such places as are illustrated by figures 1-4, plate XLVII.

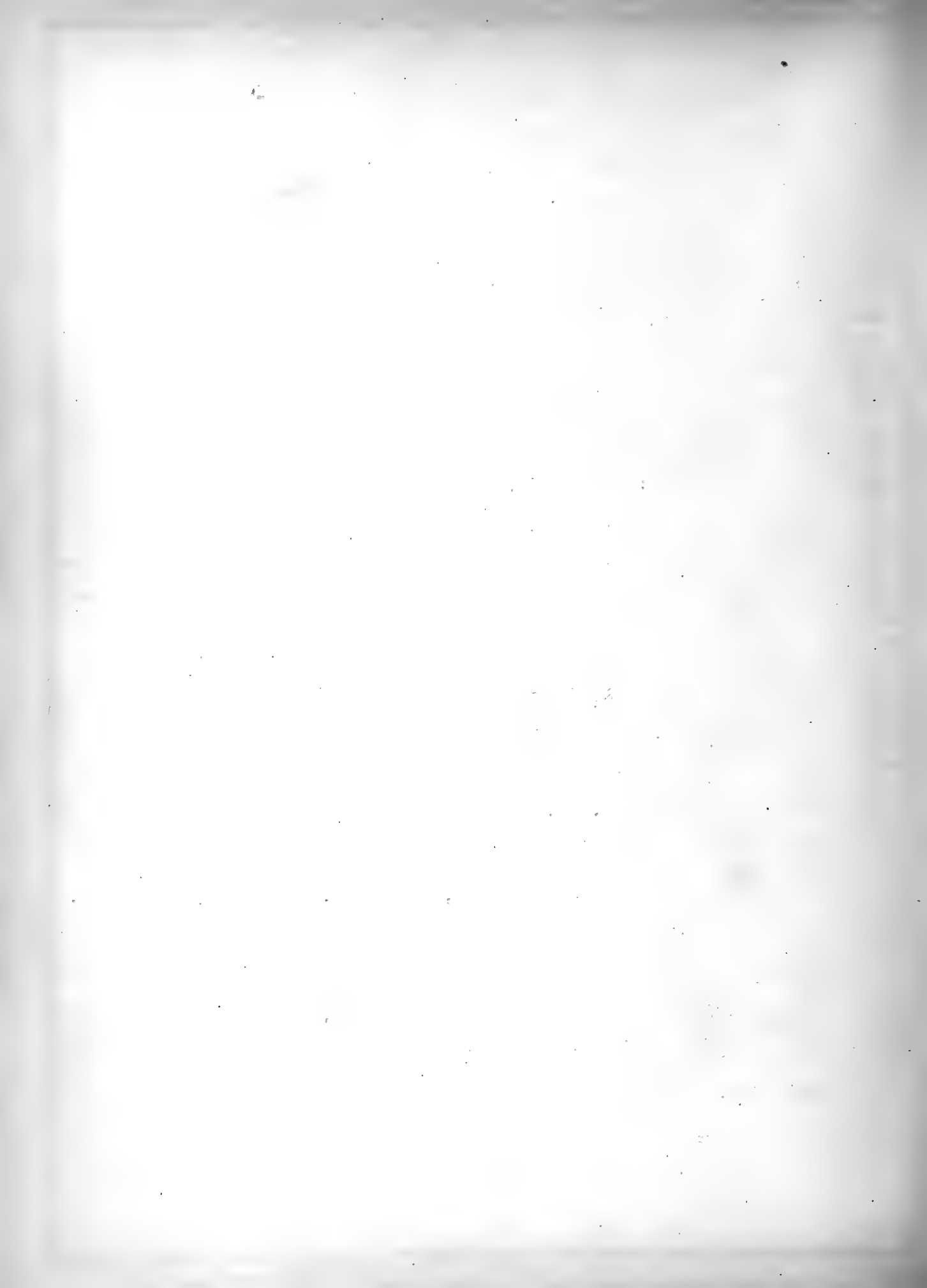
310. *Meleagris gallopavo silvestris* (Vieill). Wild Turkey.

We did not see the wild turkey during our visits to southern Illinois, but it was reported by sportsmen and others as being still present in small numbers in some of the wild timbered regions of that part of the state. At Thebes, a merchant told me that several were seen and one was killed January, 1907, in the hills of Alexander County, northeast of Thebes. It has been seen near Elizabethtown, in southern Hardin County, within recent years. Specimens were taken in Union county by K. W. Ellis near the place illustrated by figure 2, plate XXXVI. Mr. Ellis tells me that turkeys frequented the bottoms near Running Lake to feed on the berries which are very abundant in the open places of that vicinity. At Olive Branch a farmer assured me that they were abundant in the dense timbers and the cypress swamps in the vicinity of Horse-shoe Lake. (Figure 1-2, plate XXXIX).

316. *Zenaidura macroura* (Linn.). ^uM_Λorning Dove.

The ^um_Λorning dove is a common resident of southern Illinois throughout the year, and large numbers were in the open fields during the winter. A flock of seventy five was flushed, February 8, from a field of corn stalks near Grand Chain, Pulaski County, where they were feeding on the corn left behind at harvesting. In summer this species was very widely distributed, occurring almost everywhere except in woods and in dense shrubbery. It was most abundant in orchards (figures 1-2, plate XXVIII), meadows, pastures, and grain fields. As the wheat ripened, the numbers of

^umorning doves increased in wheat fields, indicating that it was the grain these birds were seeking. Indeed the gullets of several specimens collected were gorged with wheat. The orchards afforded many favorite nesting sites, and many were to be found in such places; but a large proportion of the nests were on the ground in timothy, wheat, and pasturelands. Some were in the grass between rows of apple trees, showing that the birds prefer to nest on the ground even when favorable sites in trees are close at hand. The nests (figures 1-2, plate IV) found east of Mount Vernon, June 14, are fair examples of the crude ground nest of the dove. In addition to the mat of grass already present, only a few grass stalks were used in its construction. It was in the grass to the right of the apple tree seen in the foreground of photograph (figure 1, plate XXVIII). The firm and well constructed nest illustrated by figure 1, plate V, was in the crotch of the tree just mentioned. Being built in a tree, it was necessarily of a better construction than the one on the ground, but a few yards distant. This nest was an exceptionally good one, for even nests in trees were usually fragile and loosely put together. Some were built on horizontal branches in such a way that it was a miracle that they escaped destruction in the wind storms. The nest figure 2, plate V, was found in a corn-field near Beason, Logan County, June 16. Its situation was unusual as it was exposed on the freshly tilled earth without concealment or protection except by corn stalks which afforded but little shade at this stage of their growth. The corn had been plowed for the last time, and it is probable that the young were successfully reared.



325. *Cathartes aura* (Linn.). Turkey Vulture.

No landscape of southern Illinois is complete without one of these ungainly creatures circling about the wooded hills or leisurely soaring over the country in search of carrion. In extreme southern Illinois the turkey vulture was seen throughout the year, and its numbers in winter were even greater than in summer. In our statistical data seventy were recorded for southern Illinois, February 6 to 21, while but thirteen were seen June 4 to July 1. In the winter when hunger presses them hardest, they were very easy of approach and oftentimes we were able to get within a few rods of the tree in which they were perched. In the coldest weather they were most abundant in the dense timberlands resting in the tops of the giant trees, or perhaps soaring aimlessly about over the tree tops. They were very common in the vicinity of Olive Branch, Alexander County, December 31, 1907 to January 3, 1908. On the afternoon of December 31 a partial albino was seen in company with three other vultures near Horse-shoe Lake. This bird had large white patches on the wings and a broad white band across the tail - both very conspicuous at a long distance.

The black vulture has been reported from southern Illinois, but it was not seen by us during our visits to that section of the State.

331. *Circus hudsonius* (Linn.). Marsh Hawk.

A marsh hawk was seen November 9, 1906, in a small orchard a mile north of Ashley, Washington County. This is the only record of this bird made by us in southern Illinois.

333. *Accipiter cooperii* (Bonap.). Cooper's Hawk.

Hawks of this species were seen in southern Illinois



as follows:- two November 2 circling over a pasture near Ullin, Pulaski County, one November 6 northwest of Cobden, Union County, another November 13, north of Patoka, Marion County, and three February 6, east of Thebes, Alexander County.

337. *Buteo borealis* (Gmel.). Red-tailed Hawk.

The red-tailed hawk was the most abundant of the larger hawks in southern Illinois, outnumbering even the red-shouldered hawk, which is usually considered the commonest species. The extensive timber areas of that part of the state attract many such birds because of the favorable retreats and nesting sites which these forests offer. No specimens of this hawk were secured, and I am unable to say whether any belonged to the subspecies krideri, or to the western form calurus both of which have been taken, although rarely within this state.

339. *Buteo lineatus* (Gmel.). Red-shouldered Hawk.

The red-shouldered hawk was common throughout the year. A female was secured at Running Lake, northeastern Union County, December 26, 1907. This bird was captured at ten o'clock at night by one of the dogs in company with a coon-hunting party. Its gullet was gorged with flesh indicating that it had been feeding at or near the time of its capture. It was still alive and seemed to be in a healthy condition. It was probably surprised in the act of feeding upon the ground.

349. *Aquila chrysaetos* (Linn.). Golden Eagle.

Our only record of the golden eagle was made February 19, 1907, when one was seen from the top of Williams Hill in the Eagle Mountains of southeastern Saline County. This bird presented a striking appearance as it swept down the narrow wooded valley, uttering its defiant scream as if proclaiming himself

the monarch of the hills.

357. *Falco columbarius* (Linn.). Pigeon Hawk.

A pigeon hawk was seen November 1, 1906, near Villa Ridge, Pulaski County - the only one recorded by us in southern Illinois.

360. *Falco sparverius* (Linn.). American Sparrow Hawk.

The American sparrow hawk was the commonest of the hawks represented in southern Illinois, and was about equally abundant in winter and in summer. It showed no decided preference for any kind of situation, but was as often found in the open, cultivated fields as in forests or wooded pasturelands. When in the fields it was often seen leisurely resting on a fence post or dead tree, but was commonly hovering in mid air,- its accustomed method of searching for food. In a visit to Grand Tower, December 23 to 28, 1907, I found it oftenest in the clearings and about the large, dead trees which contained many deserted woodpeckers' holes, appropriated by the hawks for their winter quarters.

366. *Asio wilsonianus* (Less.). American Long-eared Owl.

A long-eared owl was found February 12, 1907, in a tract of timber about a mile north of Metropolis, Massac County.

368. *Syrnium varium* (Barton). Barred Owl

Two barred owls were seen April 9, 1907, in a woodland about two and a half miles north of Keensburg, Wabash County. These birds were accidentally discovered while I was counting with the assistance of a field glass a number of goldfinches which were frolicking and singing merrily in the upper branches of the trees. Although stupid in appearance, these wise creatures were well aware

of my presence, for when I walked about the tree to get different views, their drowsy looking faces closely followed my movements.

December 27, 1907, I secured a fine female of the barred owl in the dense timberland bordering Running Lake in Northwestern Union County. The condition of the timber and the jungle of vines is illustrated by figure 2, plate XXXVI. January 2, 1908, another was seen in the cypress swamp at Horse-shoe Lake, Alexander County. This owl is comparatively common in this part of the state, and is often taken by hunters and farmers who condemn it because of its supposed depredations on poultry and wild game birds.

387. *Coccyzus americanus* (Linn.). Yellow-billed Cuckoo.

During June 4 to July 1, the yellow-billed cuckoo was common, and widely distributed over the area visited. It was oftenest met with in timberlands and orchards, and in places where there was more or less shrubbery. A nest containing one egg was found, June 4, in an apple orchard near Thompsonville, Franklin County.

388. *Coccyzus erythrophthalmus* (Wils.). Black-billed Cuckoo.

A black billed cuckoo was seen June 13, near Ina, Jefferson County, in shrubbery at the margin of a plowed field. This is our only record of this species in southern Illinois.

390. *Ceryle alcyon* (Linn.). Belted Kingfisher.

Since but little time was spent along the rivers, very few of this species were recorded. On February 9, a pair flew by us several times while we were on the Ohio River at Baccus Landing, Massac County, and we were told that kingfishers usually spent the winter in that locality. Another was seen June 21, about

one and a half miles north of Desota, Jackson County.

393. *Dryobates villosus* (Linn.). Hairy Woodpecker.

The hairy woodpecker was present in greater numbers in the winter than in the summer. During February 6 to 21, we found it almost entirely restricted to the larger forests, preferably those containing many large trees. This and the following species were common at Grand Tower and Olive Branch, December 23, 1907 to January 3, 1908.

394c. *Dryobates pubescens medianus* (Swain.). Northern Downy Woodpecker.

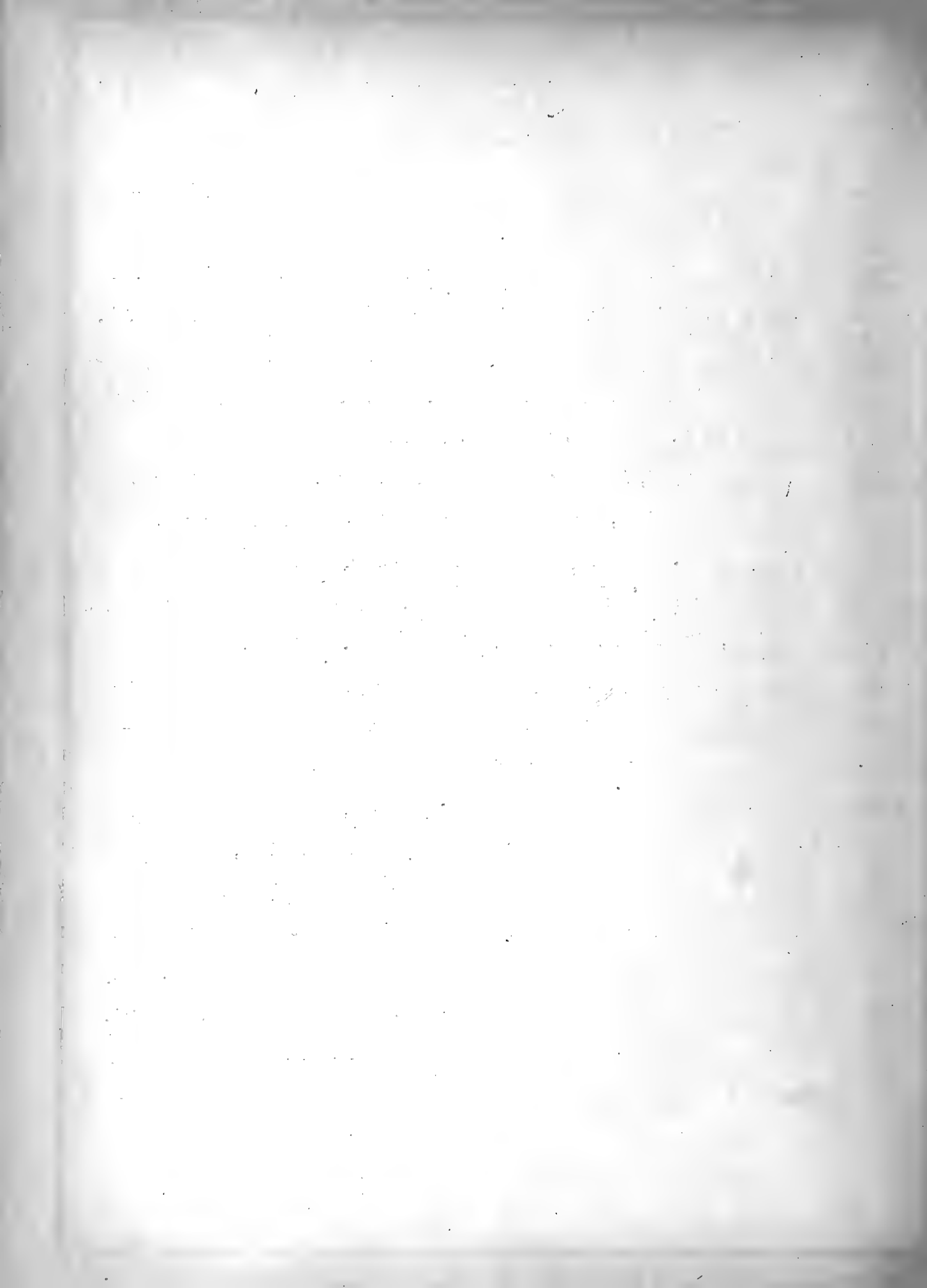
The downy woodpecker was much more common and generally distributed than its cousin, the "hairy." There was no appreciable difference in its numbers in winter and in summer. Patches of tall "hog weeds" along the edges of cultivated fields, or on the bottomlands were favorite resorts of this species, especially during the winter. Often this confiding creature would allow me to stand within a few feet of it while it dextrously extracted an appetizing larva from the pith of a giant weed.

402. *Sphyrapicus varius* (Linn.). Yellow-bellied Sapsucker.

Very few yellow-bellied sapsuckers were recorded in southern Illinois, as but little time was spent there during either the spring or the fall migration. Only two were seen on our trips in the Wabash Valley from Robinson to Brownsville, April 5 to 11, inclusive. One was noticed December 28, 1907, in the heavy growth of timber above Running Lake, Union County, but no others were observed during the winter months.

405a. *Ceophloeus pileatus* (*abieticola*?). (Bangs.). Northern (?)
Pileated Woodpecker.

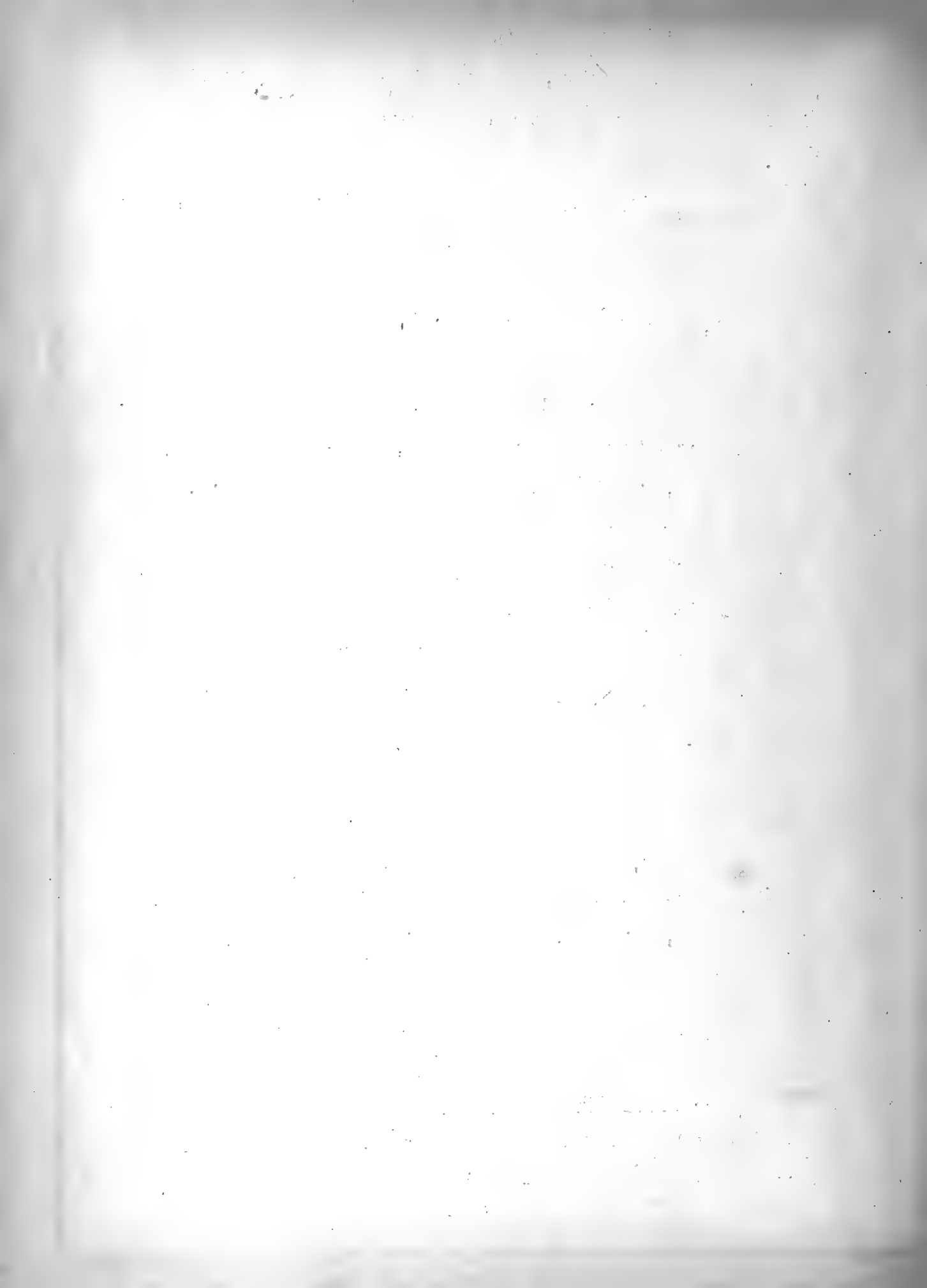
The occurrence of this species in Illinois is at present restricted mainly to the densely wooded districts, especially those of southern Illinois. Whether it is in hills or in bottomlands, extensive tracts of timber seem to be essential for its existence, and it is seldom that it is seen near the haunts of man. Figures 3-4, plate XLVII show the condition of the timber in some of the places inhabited by this woodpecker. Most of the available timber has been cut, and a dense second growth is rapidly taking its place; but among this growth a few giant trees and dead tree trunks are left standing, and these are ideal material for the woodpecker's chisel. My first acquaintance with this large and beautiful woodpecker was made February 19, in the hills known as the Eagle Mountains, in southeastern Saline County. As we were coming down the slope of Williams Hill a female pileated flew past and alighted on a large dead tree trunk about seventy five yards distant. She was followed by a magnificent male which uttered a loud rattling call, resembling that of a kingfisher, as he alighted on the same tree. The male went through very peculiar antics, calling vigorously and tapping off a love song to his mate as she worked her way along a dead branch, seemingly indifferent to the attentions of her ardent lover. As soon as these birds caught sight of us, they took wing, flew far down the valley, and were seen no more. Their flight is not undulating, as is that of the flicker, but with head and neck outstretched and crest thrown back, they fly in an apparently straight line. There is no bird more striking in appearance than one of these large woodpeckers as he flies in his seemingly



awkward and laborious fashion, uttering his sharp penetrating call and displaying the bright crest and the large white patches on his black wings.

On a collecting trip to Jackson and Union counties, during the latter part of December, 1907, I found the pileated to be common in the low, swampy timber of the Big Muddy bottoms. Figure 2, plate XXXVIII, illustrates a favorite resort of this bird, and incidentally shows the primitive character of this part of the state. There are many such timbered swamps and shallow lakes, which present a tangled mass of fallen tree trunks, moss-covered logs, snags and other obstacles, which make them difficult to traverse. In such a place the wary woodpecker can easily get away and scoff at the vain efforts of his pursuers to come within gunshot of him. Often, while resting at the tent, I could hear distinctly the loud flicker-like call of the pileated or his vigorous pounding on a resonant limb, the sound of which came from the hills across Running Lake. The chips cut by this woodpecker in his search for food are enormously large, and the ground about his favorite trees is sometimes covered with the debris of his work. January 3, 1908, while at Olive Branch, Alexander County, I was surprised to find a large male in an open grove at the very margin of the village. He did not linger long, however, and was off for the hills. No other specimens were seen during the time spent in the vicinity of Olive Branch, although very favorable places were visited.

The ranges of the northern and southern pileated woodpeckers C. pileatus and C. pileatus abieticola intersect in southern Illinois, and since no specimens were collected, it is impossible to say with certainty to which sub-species the specimens seen belong.



The northern forms have larger white wing patches, the black is more brownish, and their size is somewhat larger. A difference too slight for recognition in the field.

406. *Melanerpes erythrocephalus* (Linn.). Red-headed Woodpecker.

The red-headed woodpecker is a common permanent resident of southern Illinois. Its numbers during the winter are apparently very erratic. On the winter trips from Thebes to Eldorado, February 6 to 21, less than a half dozen of these woodpeckers were seen, but at Grand Tower, Running Lake, and Olive Branch, December 23, 1907 to January 3, 1908, they were excessively abundant. Every one of the woodlands and forests visited at these places - especially those in the bottoms near Grand Tower, was voiced with the incessant calling and chattering of these noisy birds; and it seemed as though the whole red-headed woodpecker population of Illinois was assembled in this corner of the state. Often they were quite annoying to one attempting to observe or collect other birds; and at times as many as a dozen would follow after me, protesting my progress, and scaring every creature within range. Even when several of them were shot this did not put a stop to their interference. They were most active during the early morning hours, but were well represented at all times of the day. Another instance of the irregular movements of this woodpecker is shown in Mr. Ridgway's account of an unusual migration from the vicinity of Mount Carmel in 1879¹. During October, although he made daily excursions to the woods in various directions

¹Bul. Nuttall Ornithological Club 81, vol. 6, pp. 120-122.

he saw but three individuals, while shortly before, and during the winter of previous years, they outnumbered all other species taken together. He says further that the other members of the family were normally abundant.

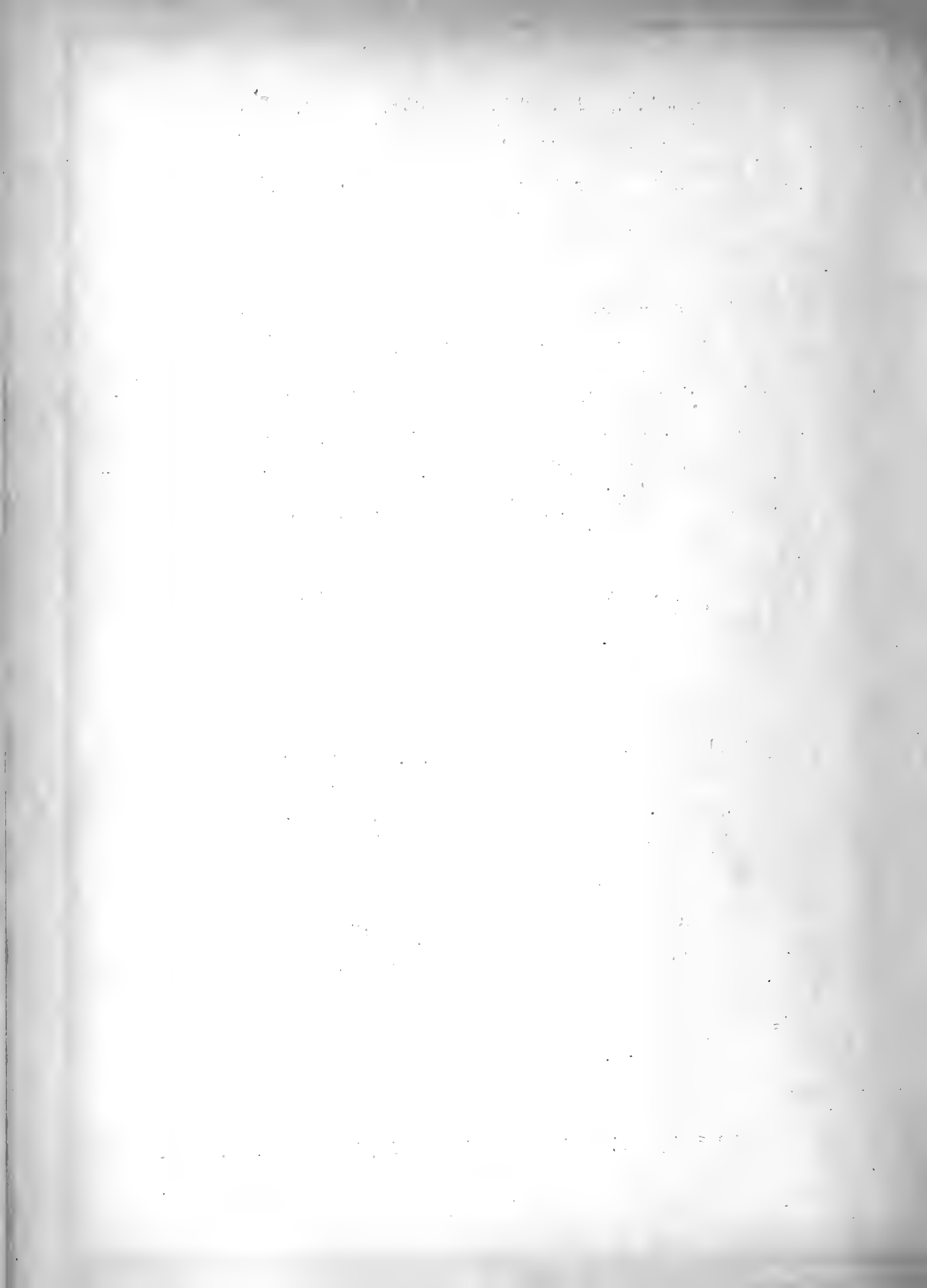
409. *Centurus carolinus* (Linn.). Red-bellied Woodpecker.

The red-bellied woodpecker was one of the most abundant members of its family between Cairo and Pana, October 31 to November 16, 1906, and between Thebes and Eldorado, February 6 to 21, 1907. Only two were seen during the summer (June 4 to July 1, 1907) and the majority evidently go elsewhere to breed, but apparently not to the northward, as not a red-bellied woodpecker was seen in central Illinois, July 9 to 24, or in northern Illinois, July 29 to August 23, and they are reported as rare in Wisconsin, Minnesota, and northern Iowa. In southern Iowa this bird has been found common during the winter, and Dr. W. W. Cook has been unable to determine just where they go to breed¹.

412a. *Colaptes auratus luteus* (Bangs.). Northern Flicker.

The flicker was common in southern Illinois at all times, but was most abundant in the open fields. It was seldom seen in the dense forests. During the summer it was oftenest met with in pasturelands and uncultivated fields, - as was to be expected because of its well known practice of feeding on ants. In the winter the cornfields offer the greatest attractions to this species.

¹Cook Bird Migration in the Mississippi Valley, p. 132.



423. *Chaetura pelagica* (Linn.). Chimney Swift.

The chimney swift was very common in southern Illinois from June 4 to July 1, 1907, especially in some of the cities and towns, where, shortly before dusk, immense swarms of them could be seen circling about and entering tall unused chimneys which served as roosting places. Large numbers of them were often seen, however, skimming over the fields in the heat of the day far from any city or town.

428. *Trochilus colubris* (Linn.). Ruby-throated Hummingbird.

One ruby-throated hummingbird in the vicinity of Benton, and two in a woodland near Harrisburg, June 6, are all that we saw from June 4 to July 1, 1907. Although a well known bird, it is apparently not common in the southern part of the state.

444. *Tyrannus tyrannus* (Linn.). Kingbird.

The kingbird was the commonest representative of the fly catchers, and one which was widely distributed. It was usually found in open fields about the shrubbery along fences, or in the orchards, places which offered favorite nesting sites. A nest containing three eggs was detected near the top of the tree seen in the foreground of figure 1, plate XXVIII. Here these birds were dwelling in harmony with a pair of orchard orioles which had hung their nest on the opposite side, and with a pair of mourning doves with their two fledglings in the fork below.

452. *Myiarchus crinitus*. (Linn.). Crested Flycatcher.

The crested flycatcher was common, June 4 to July 1, in the forests and woodlands, preferably in those where there were numbers of old trees containing natural cavities or deserted

woodpecker holes where this peculiar bird could build its nest and display its warning sign of snake skins. Its sharp calls and barks always attracted our attention, even when at a great distance, and for this reason the relative abundance of this species probably seemed to us much greater than it really was.

456. *Sayornis phoebe* (Linn.). Phoebe.

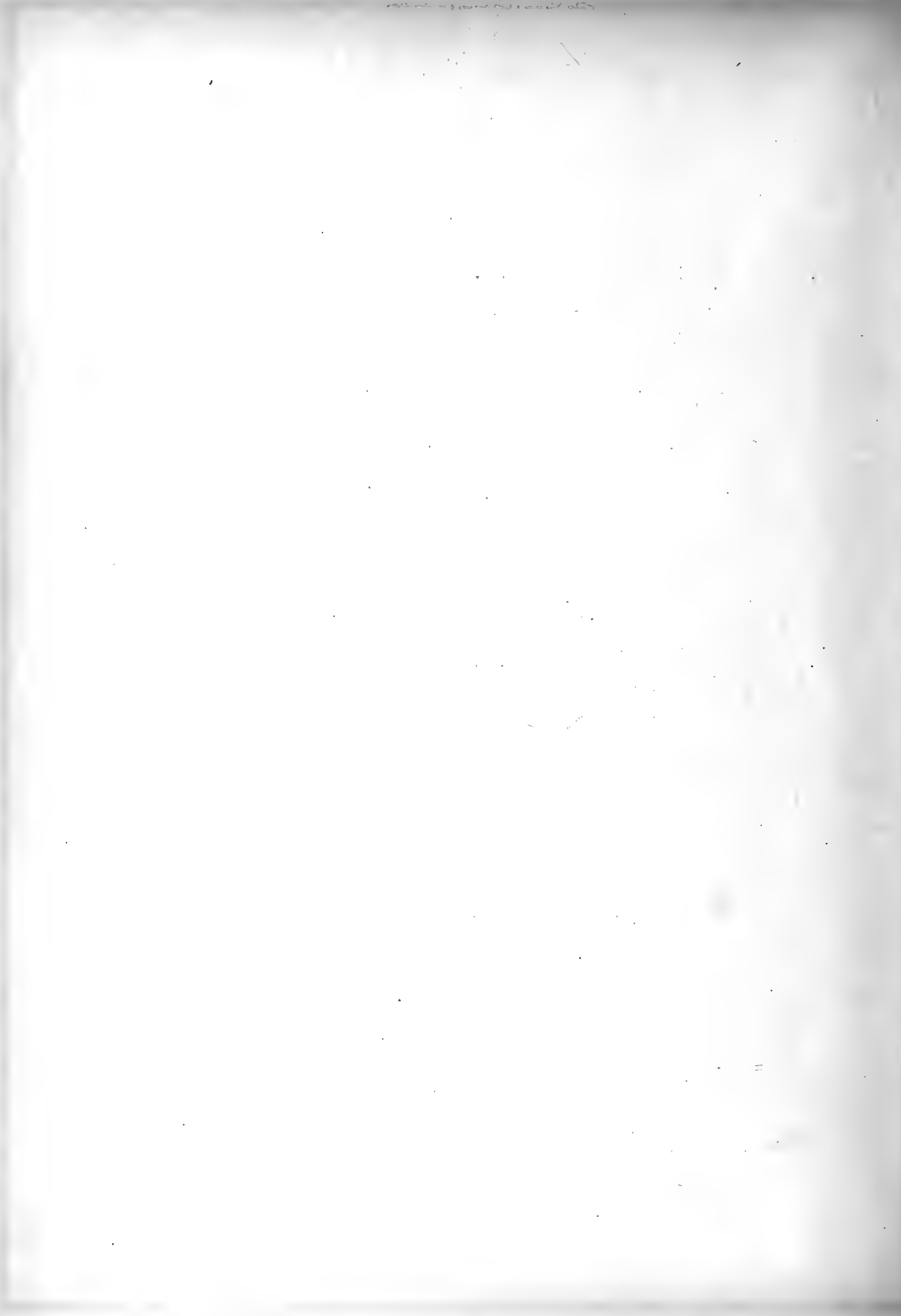
Apparently few phoebes breed in southern Illinois as not more than five were seen during our studies there from June 4 to July 1, 1907. January 1, 1908, one was seen at Horse-shoe Lake near Olive Branch, Alexander County. When first noticed it was perched on an overhanging cypress limb from which it darted out frequently for the small insects flying over the surface of the lake. The winter was unusually mild, and in all probability it is not a regular permanent resident in that locality.

461. *Contopus virens* (Linn.). Wood Pewee.

The wood pewee was common only in the higher parts of the dense woodlands and forests, such as are illustrated by figure 2, plate XXXV. For this reason this and other birds of similar habitat seldom appear on the statistical records of the bird census. Often times, especially during the heat of the day, the pewee's plaintive call was the only sound that broke the utter stillness of these woodland haunts.

465. *Empidonax virescens* (Vieill.). Green-crested Flycatcher.
Acadian Flycatcher.

A green-crested flycatcher was seen, June 4, in a low, wet woodland southeast of Benton, Franklin County, and another on the following day, a mile southeast of Thompsonville, in the orchard illustrated by figure 2, plate XXXVIII.



466. *Empidonax traillii* (*traillii* ?) (Aud.).

Several of the small flycatchers belonging to the species traillii were seen during the month of June. They were usually found in the hedges along the open cultivated fields, or along old fences and places grown up to shrubbery. No attempt was made to distinguish in the field between the two subspecies alnorum and traillii; and unfortunately we were unable to secure any specimens for close examination. June 3, 1907, E. S. Woodruff saw a pair of alnori at the edge of a small apple orchard at Grandin, Carter County, Missouri¹, and secured the female but as yet there are no authentic records of this subspecies in southern Illinois.

474b. *Otocoris alpestris praticola* (Hensh.). Prairie Horned Lark.

The prairie horned lark is a common permanent resident of southern Illinois, but its numbers during February 1907 greatly exceeded those recorded during June of the same year. From February 6 to 21, more than 70 percent of these birds were found in meadows and stubble fields. Here they spent the greater part of the day, feeding on oats and the small seeds of grass and of weeds. In June an unusual number was found on newly plowed ground and in freshly cultivated fields of corn. They were not infrequently flushed in grain fields, places in which they sometimes selected nesting sites. Figure 1, plate VI, is a photograph, taken May 28, of a nest in an oats field about one and a half miles east of Ogden, Champaign County. The stage of growth of the oats and the immediate surroundings of the nest are more closely shown by figure 2,

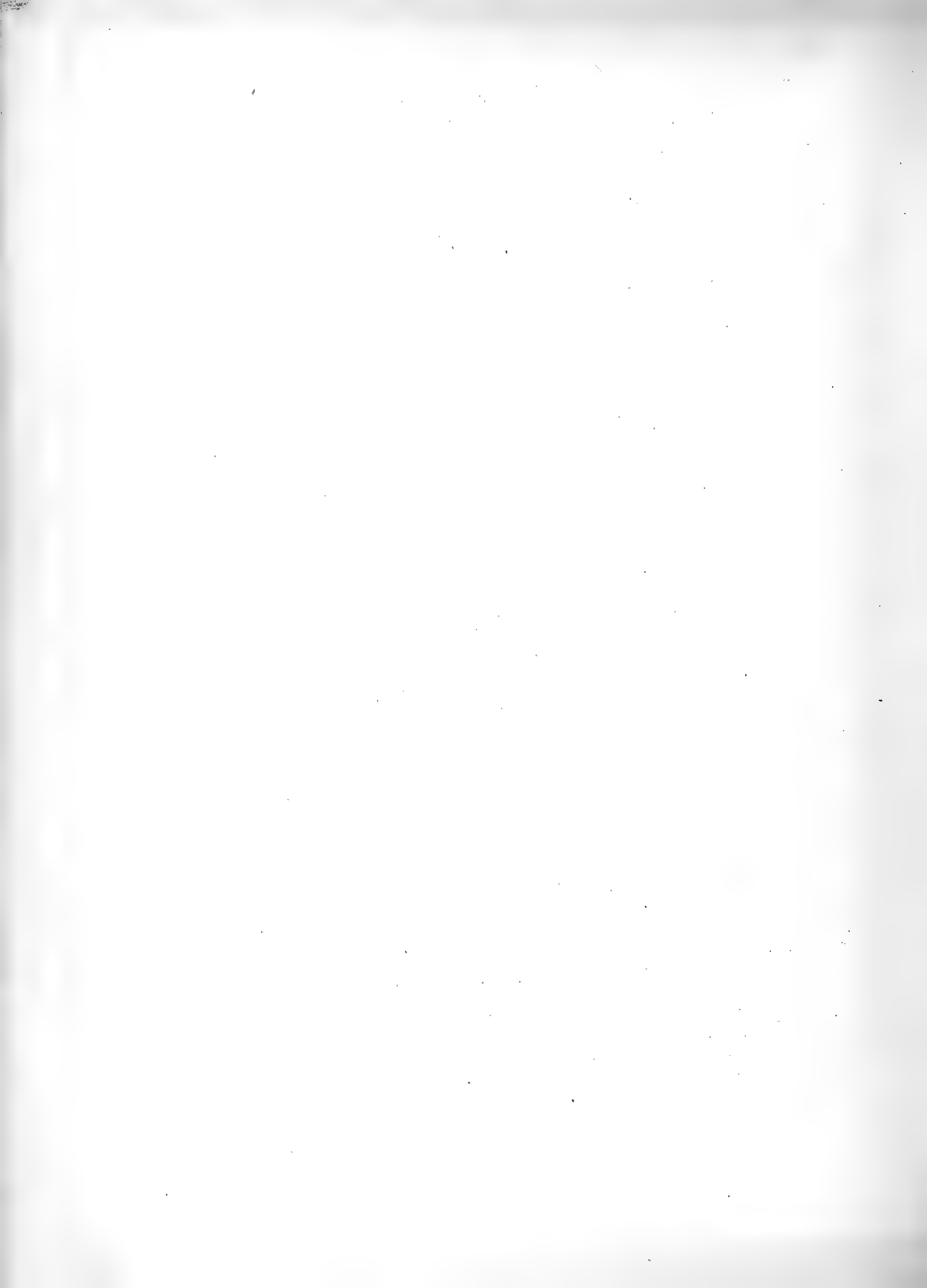
plate VI - a photograph taken at a distance of about six feet. These illustrations show how admirably the nest was concealed by the firmly lodged cornstalk and by its sunken position in the ground. Probably some of the larks seen during the winter were *praticola*, but it is difficult to distinguish the subspecies of *alpestris* in the field. All the specimens taken in southern Illinois, however, belonged to *praticola*, and if the northern form was present, it was in relatively small numbers. Several of the latter subspecies were collected in central and northern Illinois, where it is not at all uncommon during the colder months.

477. *Cyanocitta cristata* (Linn.). Blue Jay.

The blue jay is a common permanent resident throughout southern Illinois, and if the weather is not too severe, large numbers remain through the winter. During our trip across southern Illinois, February 6 to 21, the bluejay was one of the most conspicuous and abundant birds in the woods. Its loud ringing cries, and mimicking calls gave much cheer and interest to the woodlands, which seemed at times almost destitute of other bird life. Although the bluejay has many attractive characteristics, it is usually condemned by farmers and bird lovers because of its marauding habits, and its destruction of the eggs and nestlings of other birds.

488. *Corvus brachyrhynchos* (C. L. Behm). American Crow.

Crows were excessively abundant during the trip from Cairo to Ashley, October 31 to November 16, 1906. Not uncommonly flocks of several hundred arose from the stubble or corn fields, where they were probably feeding on the waste grain, which attracts many of our birds at this season. They were common throughout the



month of February, but in June their numbers were reduced to the very few that remained to nest. It is surprising that more did not remain for this purpose, for in this section of the state large timber areas afford excellent nesting retreats.

495. *Molothrus ater* (Bodd.). Cowbird.

During June the cowbirds were in small, scattered flocks in the open fields and pasturelands in the company of horses and cattle, according to their well known habit. Large numbers of these birds were seen October 30 in the vicinity of Cairo, but none were noted during the trip from Cairo to Pana, October 31 to November 16, or on any of our winter visits to southern Illinois.

498. *Agelaius phoeniceus* (Linn.). Red-winged Blackbird.

The red-winged blackbird is a common permanent resident of southern Illinois. During the summer, it was oftenest met with in the grassy marshes, where there was an abundance of reeds and willow shrubs. The small marsh illustrated by figure 2, plate XXVII^x, was within the city limits of Marion. At least five pairs were nesting in this limited area, seemingly unconscious of the pedestrians and vehicles constantly passing on either side. The nests were supported by, and interwoven among, some of the large stalks in the branches of tall slough grass seen in the foreground, but frequently they were among the thick growth of sprouts and willows which grow usually in such places. In regions where marshes were few, or wanting, the redwing resorted to pastures and meadows - especially to timothy fields, where more than half of those recorded during June 4 to July 1, were found. There they seemed to live and thrive as well as in their more usual



haunts. Figure 1, plate VII, is a photograph of a nest found June 4, 1907, in the center of a large timothy field east of Benton, Franklin County. The nest rests directly upon the ground instead of being supported at a height of several inches by the surrounding vegetation, as were those found in marshes. The nest is poorly built, and does not show the excellent and intricate workmanship usual with the redwing.

Many of the redwinged blackbirds were seen October 30, 1906, in the Mississippi lowlands west of Cairo, and immense flocks were noticed in company with bronzed grackles and cowbirds on a subsequent visit to Government Island. During February 6 to 21, 1907, none were seen on the trip from Thebes to Eldorado, although many favorite places such as cypress swamps and marshy areas along the creeks and rivers were traversed. In a visit to Jackson County, December 23 to 28, 1907, I found flocks ranging from ten to a hundred individuals in the timbered marshes southeast of Grand Tower and along the Mississippi River. At dusk many flocks were seen flying over to the southward, evidently going to some favorite resort for the night. At Olive Branch, December 31, 1907, to January 3, 1908, they were abundant in the cypress swamps about Horseshoe Lake. The swamps afforded excellent roosting places and the cornfields and shocks of corn about these resorts afforded an abundance of food which kept them from starvation when nothing better was to be found.

501. *Sturnella magna* (Linn.). Meadowlark.

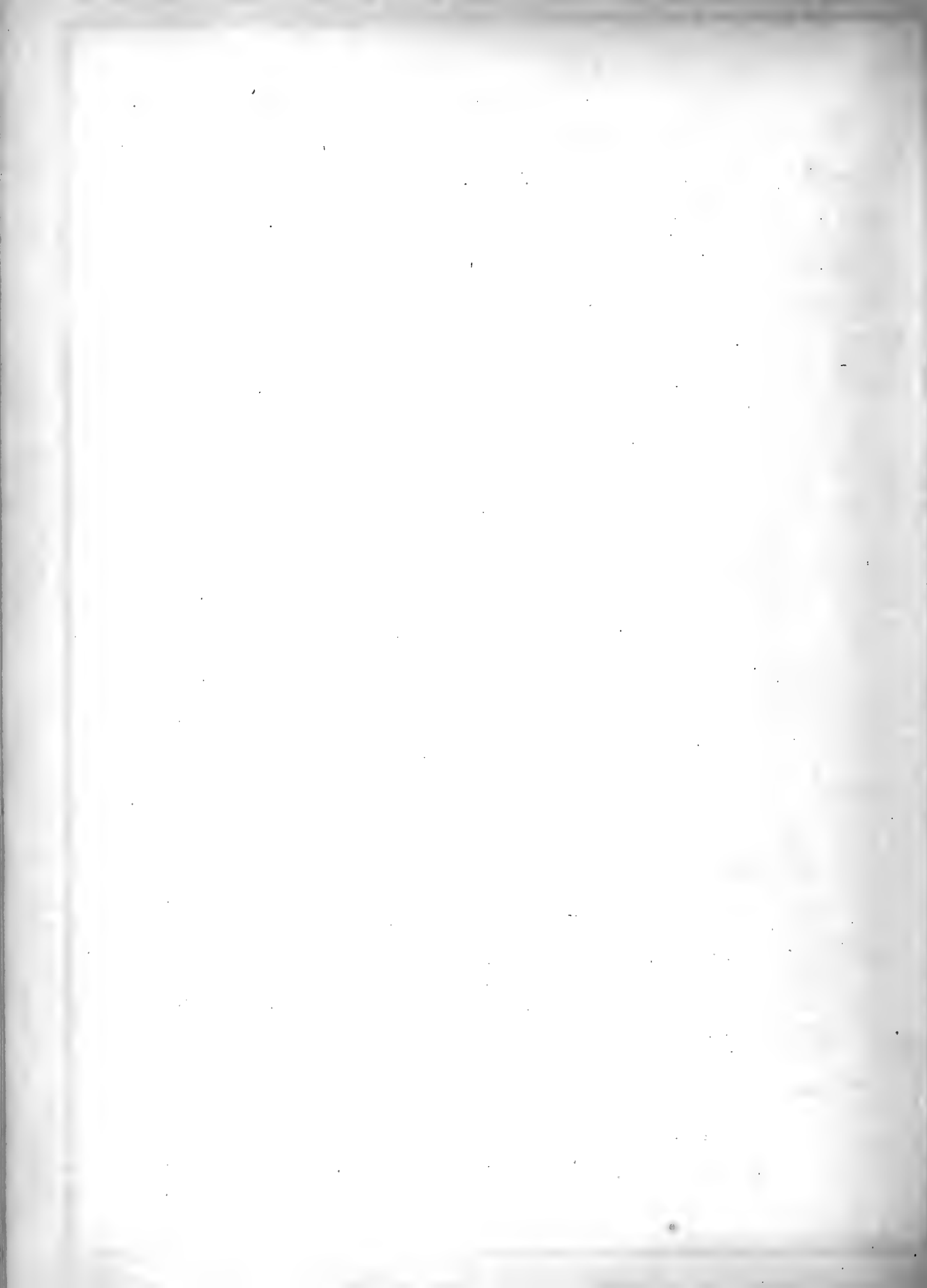
The meadowlark is a common bird of the open fields of southern Illinois throughout the year, and when the winters are not too severe it may be found in large flocks in the more favorable



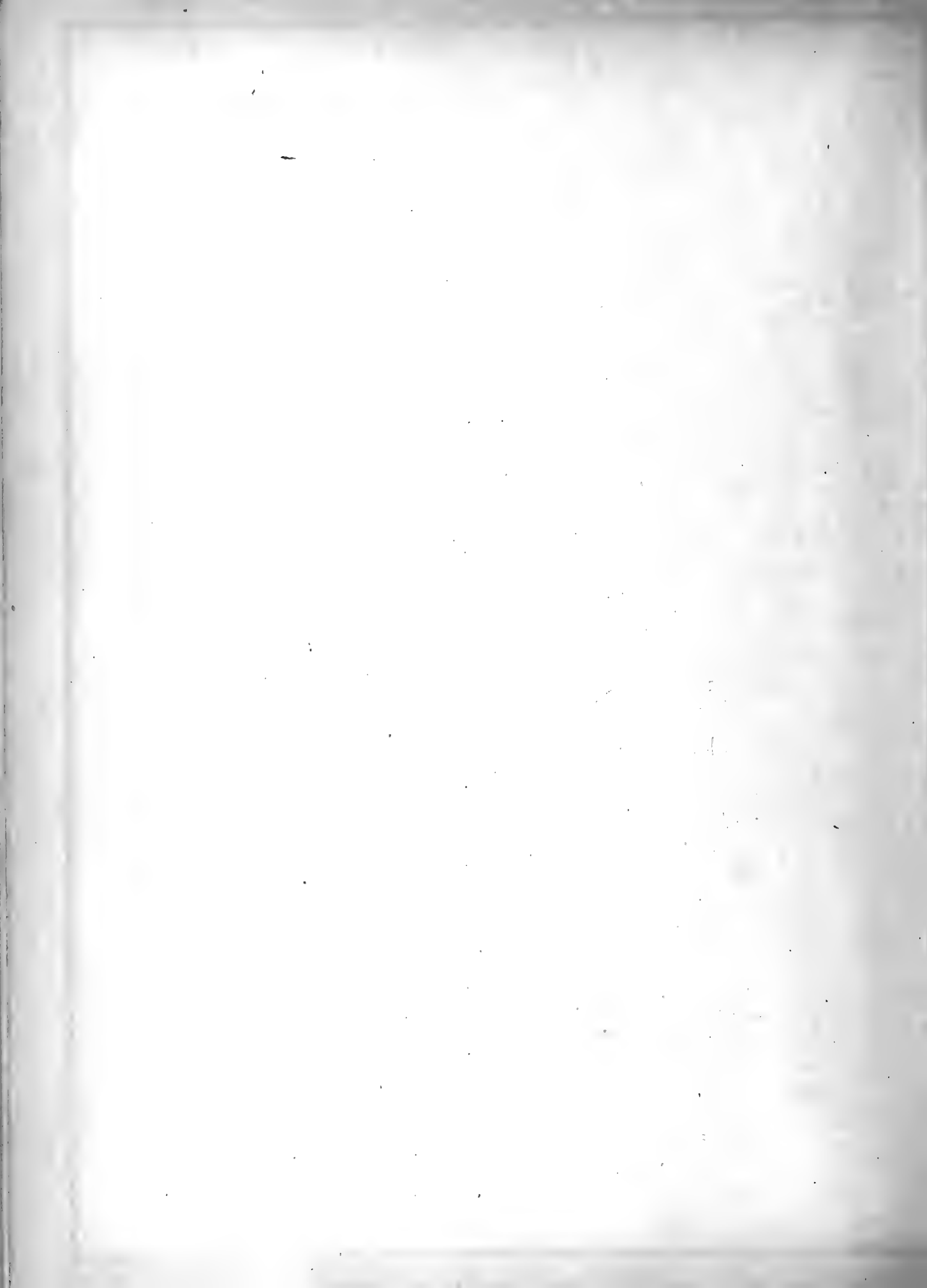
places such as cornfields, stubble, and protected pasturelands.

At Olive Branch, December 30, 1907, to January 3, 1908, meadowlarks were very abundant, and, as we traveled through the fields, flocks of twenty to forty were not uncommon. Most of the birds were very wary and seldom allowed us to approach within fifty yards before flying. They were most active during the morning hours, when they were feeding in the pastures or perched on the fence posts, pouring forth their most welcome, good-hearted notes - as spirited and gleeful as their familiar springtime song. These cheerful notes added not a little to the zest of our work during our trips across the fields.

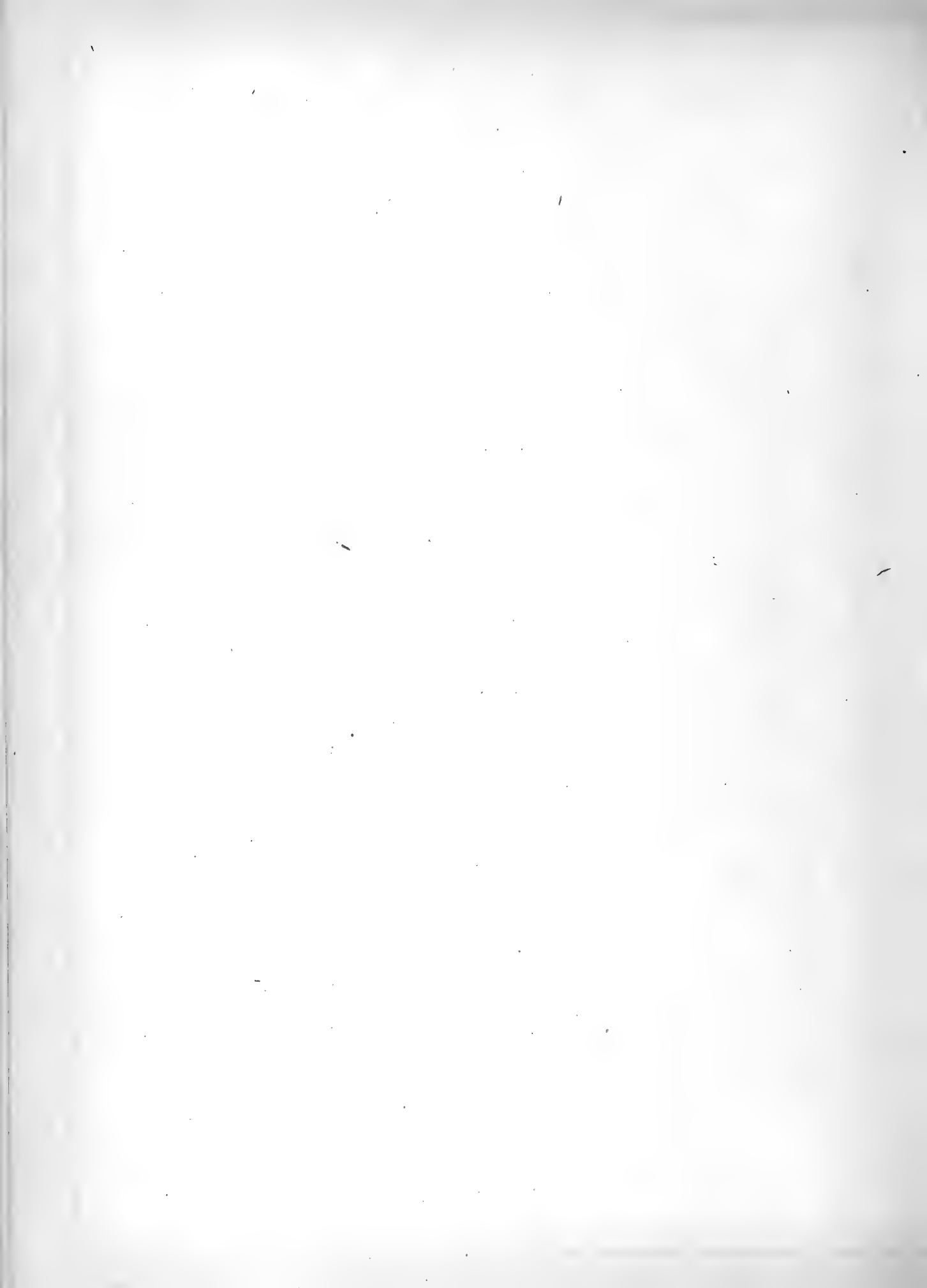
According to our quantitative observations made February 6 to 21, the meadowlark was the second most abundant bird, outnumbered only by the Junco. The cornstalk fields proved to be a favorite resort, and fifty percent of the birds were in them. Here they probably found not only a certain degree of protection, but also food in the corn left in the field, their usual supply of such food being reduced to a minimum at this season of the year. They were exceedingly abundant in the Cache riverbottoms, and several large flocks were flushed in the low grassy fields bordering the cypress swamps. Often, when startled, whole flocks would circle about and alight in the trees bordering the timber, but none were found in the interior of large tracts of timber, even in the coldest weather. In the vicinity of Golconda, February 15 to 18, they were the commonest and most conspicuous of the birds observed in the open fields. Here they seemed to prefer fields of timothy stubble to those of grass and taller vegetation. At the beginning



of the breeding season the flocks break up and, as in the case of the quail, each pair takes up its abode in the field which best pleases its fancy. In the summer, as would be expected, the greatest number were found in pastures and meadows, which are usually selected by meadowlarks for nesting. Four of ten nests found in southern Illinois, June 4 to July 1, were in pastures, three were in meadows, and three in untilled ground which had grown up to grass and weeds. These numbers do not represent the ratio of the number of birds found in these places, respectively; for the density of the meadowlark population was greater in meadows than on untilled land, and more than twice as great as in pastures. Figure 1, plate XXXIII, taken south of Marion, Williams County, illustrates the character of the vegetation on many of the pasturelands in which the meadowlark was common. The orchard in the background is also typical, for there are numerous and extensive orchards throughout this section of the state. The nest illustrated by figure 2, plate VIII, containing four fresh eggs, was found in the foreground snugly placed in the fine "tickle grass," which being very soft and light was a good material for a comfortable home. When this nest was discovered, it was partially concealed by some tall, overhanging weeds and grass. If the nest is not naturally concealed in this way, a dome of grass is often constructed over the top, something after the fashion of the quail's nest. Such a construction is beautifully illustrated by figures 1 and 2, plate IX, taken in central Illinois, in the early part of the nesting season while the grass was yet short. These nests were invariably discovered by flushing the parent bird, and doubtless the greater number of such



nests in our path through the fields were passed unnoticed. However, as said in the introduction, our attention was chiefly directed to the strip under observation, and the finding of nests outside of it was merely a secondary object. The nest shown in figure 2, plate IX, was found in a large timothy field near Clinton, DeWitt County, on May 16. The timothy was but eight inches high and the meadowlark had evidently felt obliged to construct a cover to conceal and shelter her nest. While we were preparing to photograph this nest we were suddenly surprised by a loud whirring of wings which arose from the grass not more than ten yards to the rear, and, in our amazement, we turned just in time to see a prairie hen disappear over a hill in the meadow. A search of the spot where the bird arose, revealed a nest containing nine eggs, which is illustrated and described in the article on the prairie hen. It is interesting to note the difference in the structure of these two nests, built under the same conditions, and well adapted to their purpose. The nest shown in figure 1, plate IX, was found May 30, at Crystal Lake, near Urbana. It was in the blue-grass, and the leaves about it at once suggest its situation in an oak grove. It was not far from a much frequented path, and picnics were often held in this and in an adjacent grove, an unusual place for the meadowlark to select for nesting. The firm and strong dome of this nest, intricately woven with fine blades of blue-grass, was an excellent piece of architecture. The meadowlark does not go a great distance for its nesting material, but invariably selects it from the same kind of vegetation in which the nest is found. The material is not plucked from living grass, but is selected from the mat of dead blades of last year's growth, which lies beneath the

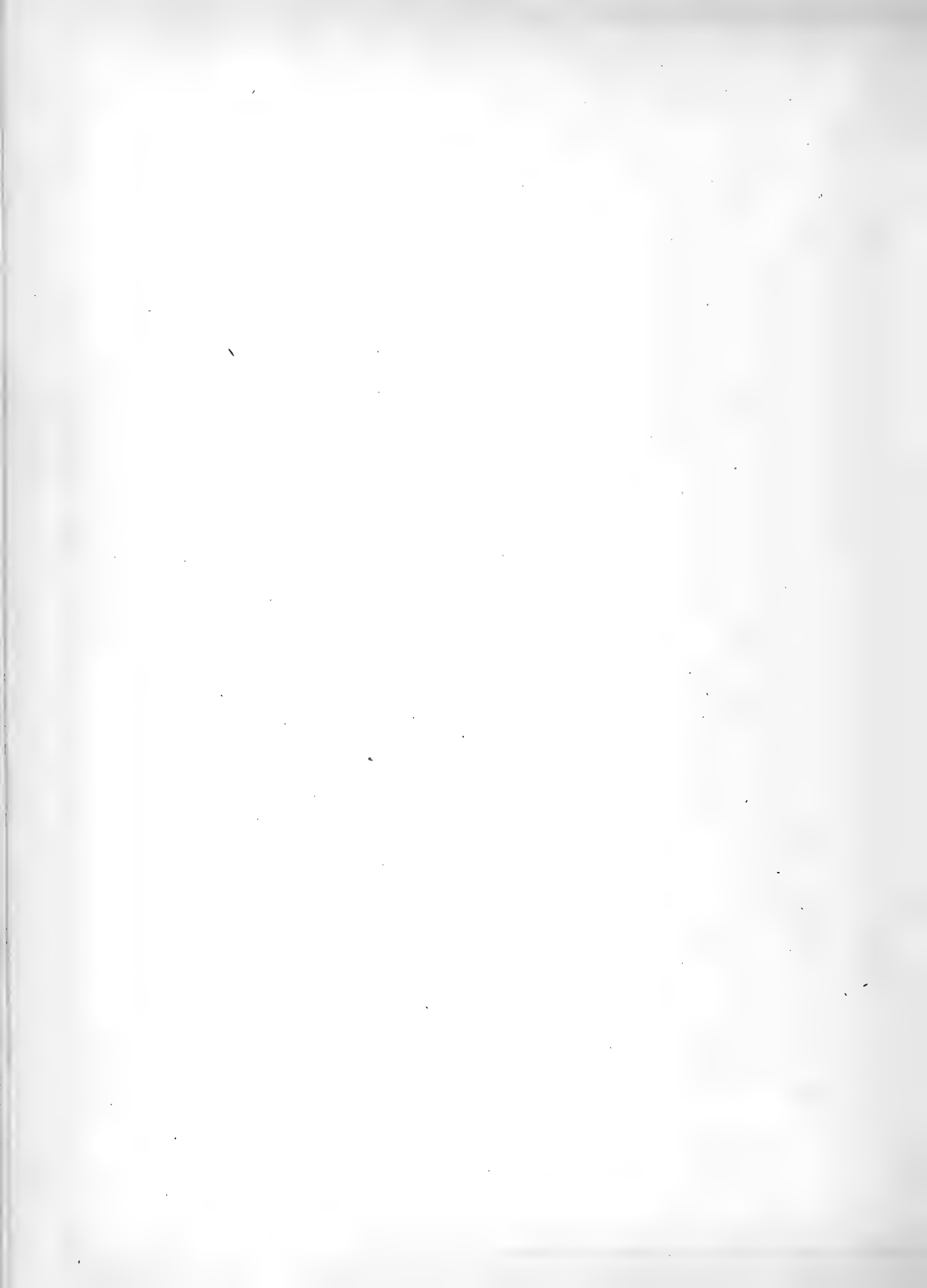


new grass. Often the unplucked blades about the nest are interwoven with this dead material, which not only strengthens the structure, but aids in concealing it.

The southern meadowlark (*Sturnella magna argentula* - Bangs) has been taken in Richland, Wabash, and Lawrence counties of southeastern Illinois, but none of the specimens collected by us approached this smaller and darker subspecies.

511b. *Quiscalus quiscula aeneus* (Ridgw.). Bronzed Grackle.

We found the bronzed grackle most abundant during the fall migration. In a trip from Cairo to Anna, October 31 to November 5, large flocks of them were met with in the corn and stubble fields, where the grain, no doubt, was the chief attraction. Although the flocks seen in the open fields were large, they were insignificant in size as compared with some of the immense assemblages to be seen in the roosts in the bottomlands and islands of the Mississippi River. On the afternoon of October 30, we visited Government Island, which lies in the Mississippi west of Cairo. This island contains several acres, and the greater part of it is covered with a thick growth of tall, slender willows and poplar trees. There were but few blackbirds there when we arrived, at three o'clock, but towards dusk thousands of them came pouring in from all directions, especially from the Missouri side of the River. These flocks were aggregations of bronzed grackles, cowbirds and red-winged blackbirds. The first to arrive were almost entirely cowbirds while the majority of the bronzed grackles were the last to appear. The noise of these living clouds was like that of a tornado as they swept and circled over and about our heads, alighting



here and there in the tops of the slender trees which swayed under the weight of the incredible numbers of the birds. There were several colored hunters on the island who were slaughtering these birds by scores to be used as food for themselves or to be sold in the markets where, we were told, they often received as much as five cents a bird. It was not unusual for these men to kill as many as a dozen at a shot, so dense was the assemblage in certain parts of the roost. When the guns were fired hundreds of birds arose, but flew in the dim light only to the tops of neighboring trees, thus giving their murderers repeated opportunities to slaughter them in their helpless and bewildered condition. Unfortunately in this promiscuous shooting, redwings and cowbirds, which are rated high in the economic scale, were killed indiscriminately with the bronzed grackles. No rusty grackles were killed here, and we saw none during our studies in the vicinity of Cairo at this time. We were told by rivermen and hunters that nearly all of these birds leave at the approach of severe weather, but that under favorable conditions many spend the winter at these roosts. None were seen during our winter studies in southern Illinois, February 6 to 21, 1907, but on the trip from Thebes to Eldorado, all of the time was spent inland, and none of the thickets in the Mississippi bottoms were visited. This winter of 1908 - which has been an unusually mild one - a flock of about a hundred of these birds has been seen throughout January and February, at a roost in the forestry of the University of Illinois, near Urbana, Champaign County. They do not seem abundant there during the summer, for those that remain are widely distributed in small colonies to nest in the shade-trees of the cities and villages, or about farm yards containing a number of

thick-topped trees to cradle their large, substantial nests. There are few birds more attractive than a male bronzed grackle perched at the topmost limb of his nesting tree, uttering his harsh metallic notes, and displaying the brilliant iridescence of his plumage in the bright sunshine. Although these birds are generally condemned by farmers, little can be said against their habits during the nesting season, for it is then that large numbers of grubs and other insects are eaten which compensates, in part at least, for the damage charged against them at other times.

506. *Icterus spurius* (Linn.). Orchard Oriole.

The orchard oriole was common and widely distributed in the places visited in southern Illinois, June 4 to July 1. It was commonest in orchards which are numerous and extensive in certain sections of southern Illinois, but some of these birds were seen in pastures where a few trees afforded suitable nesting sites, and not uncommonly others were found in gardens or dooryards about country and even city houses.

507. *Icterus galbula* (Linn.). Baltimore Oriole.

This handsome oriole, although generally common, was rare in the parts of southern Illinois visited by us June 4 to July 1, and we made record of a pair seen June 18 in an orchard near the city limits of Tamaroa, Perry County, and of a male seen June 30 in a wooded ravine near the Ohio River above Elizabethtown, Hardin County.

509. *Euphagus carolinus* (Mull) Rusty Blackbird.

The rusty blackbird was common during our trip from Cairo to Pana, October 31 to November 16, and especially so in the wet lowland timber and the cypress swamps of the Cache River



bottoms. At the latter place we found it in flocks of considerable size. Oftentimes many were quietly feeding at the margin of some swamp, while others piped a lively chorus from the neighboring tree-tops and shrubbery. No other species was associated with the rusty blackbirds seen on this trip, very frequently, however, they mingle with flocks of bronzed grackles, cowbirds, and red-winged blackbirds. They were also common between Harvey and Brownsville during the early spring, March 26 to April 11, 1907.

517. *Carpodacus purpureus* (Gmel.). Purple Finch.

During our trip across the southern end of the state, February 6 to 21, the purple finch was common and widely distributed over the entire distance covered by us. It was most abundant in the river bottoms, where it was usually feeding on the seeds of the sycamore, ash, and elm trees, which constitute the greater part of its food during the winter months. A female, taken at Golconda February 15, had its crop gorged with sycamore seeds. Many small companies of these beautifully tinted finches were seen in the ravines and protected places of the Eagle mountains, in southeastern Saline County.

529. *Astragalinus tristis* (Linn.). American Goldfinch.

The goldfinch was present during all our visits to southern Illinois, but many more were seen during the fall trip from Cairo to Pana, October 31 to November 16, than at any other time. November 13 we saw eighteen in the Bear Creek bottoms, north of Patoka, Marion County. The males of this small band had not yet their full winter plumage, but were still in the transition stage. A few of them were resting in some of the low bushes, arranging their feathers in the sunshine. Others were below, drinking and

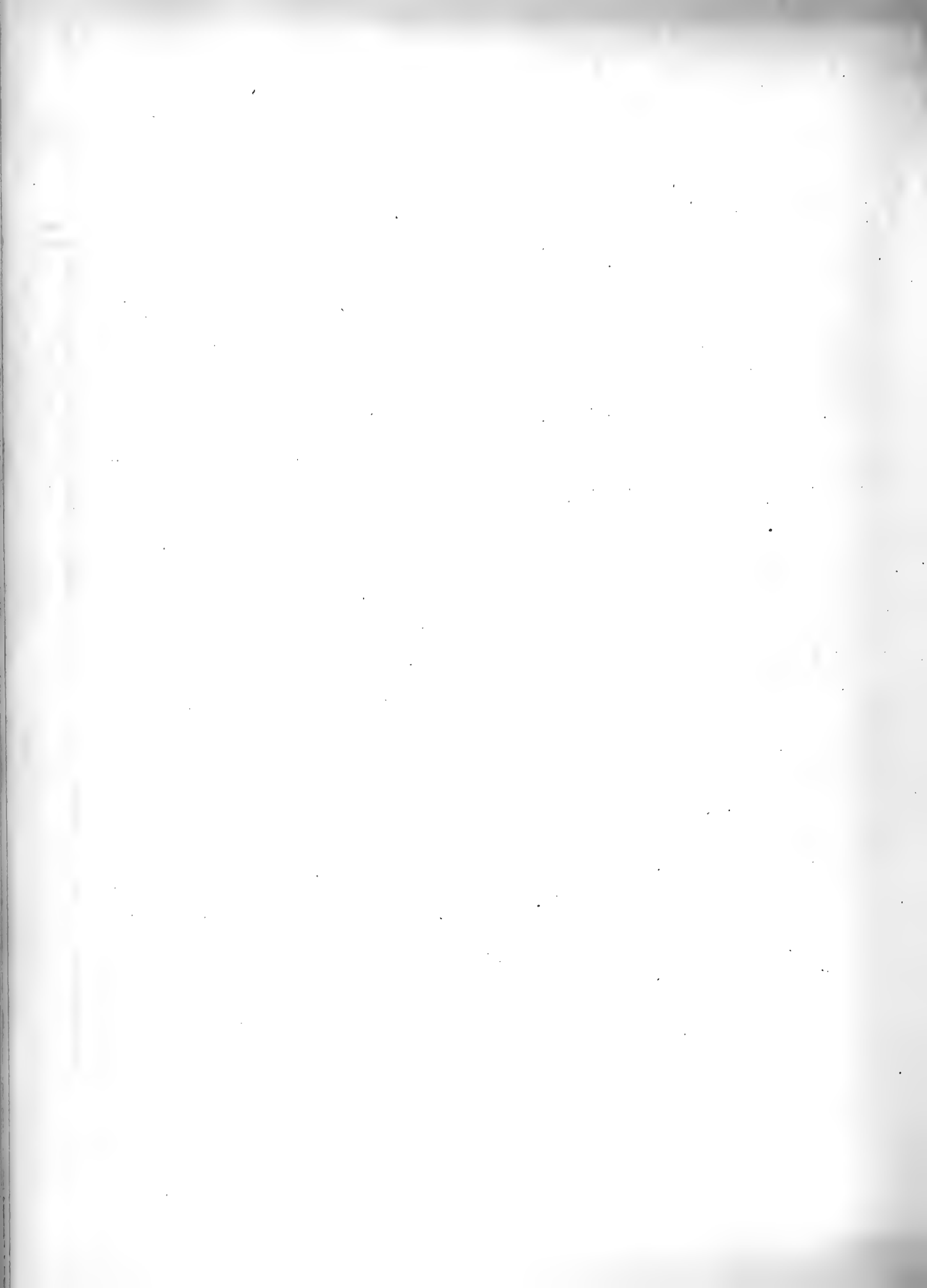
bathing in the water about a broken place in the ice. The air was crisp and every branch sparkled with glittering frost crystals - a most beautiful setting for this charming picture of winter bird life. Only a few were noticed during the trip from Thebes to Eldorado, February 6 to 21, but many were seen in the vicinity of Olive Branch, December 30, 1907, to January 3, 1908. From June 4 to July 1, they were common in orchards and in the shrubbery of the open fields and pasturelands.

533. *Spinus pinus* (Wils.). Pine Siskin.

The pine siskin apparently has a very local distribution in southern Illinois. All recorded by us in that section of the state were seen November 2 in northern Pulaski County. A flock of five was found in a small cluster of poplar trees in the midst of a cypress swamp south of Ullin. The gullet and stomach of a female taken here was full of the seeds of the poplar and ash. A flock of twelve was seen in the woods about two miles north of Ullin. Near Wetaug we found several small flocks associated with large numbers of American goldfinches. Both species were actively feeding and merrily singing among the very uppermost branches of some giant sycamores. Although so common in this limited area, we saw no others during our travels over the entire state.

Passer domesticus (Linn.). English Sparrow House Sparrow

The English sparrow is a common permanent resident of southern Illinois. No other bird is so quick to adapt itself to every existing condition. During the summer it was distributed over almost every kind of crop and field, shifting its feeding grounds as conditions changed. It was seen in forests and large



orchards as well as in pastures and grain fields. It was common in an extensive forest tract along the Saline River, especially about the cabins which were scattered here and there at considerable intervals. The English sparrow has appropriated the boxes and bird houses formerly occupied by bluebirds, purple martins, and the like, which have been forced either to find new nesting places or to migrate to the far north where the sparrow is unable to endure the severe winters. Few were seen in the forests during the winter, and most of these which live in the open fields in summer, flock in winter to the farm houses, villages, and cities where they depend largely on the crumbs and refuse of the houses for their food. On the farms they often make themselves an intolerable nuisance in the chicken yards snatching up the food given to the poultry.

540. *Pooecetes gramineus* (Gmel.). Vesper Sparrow.

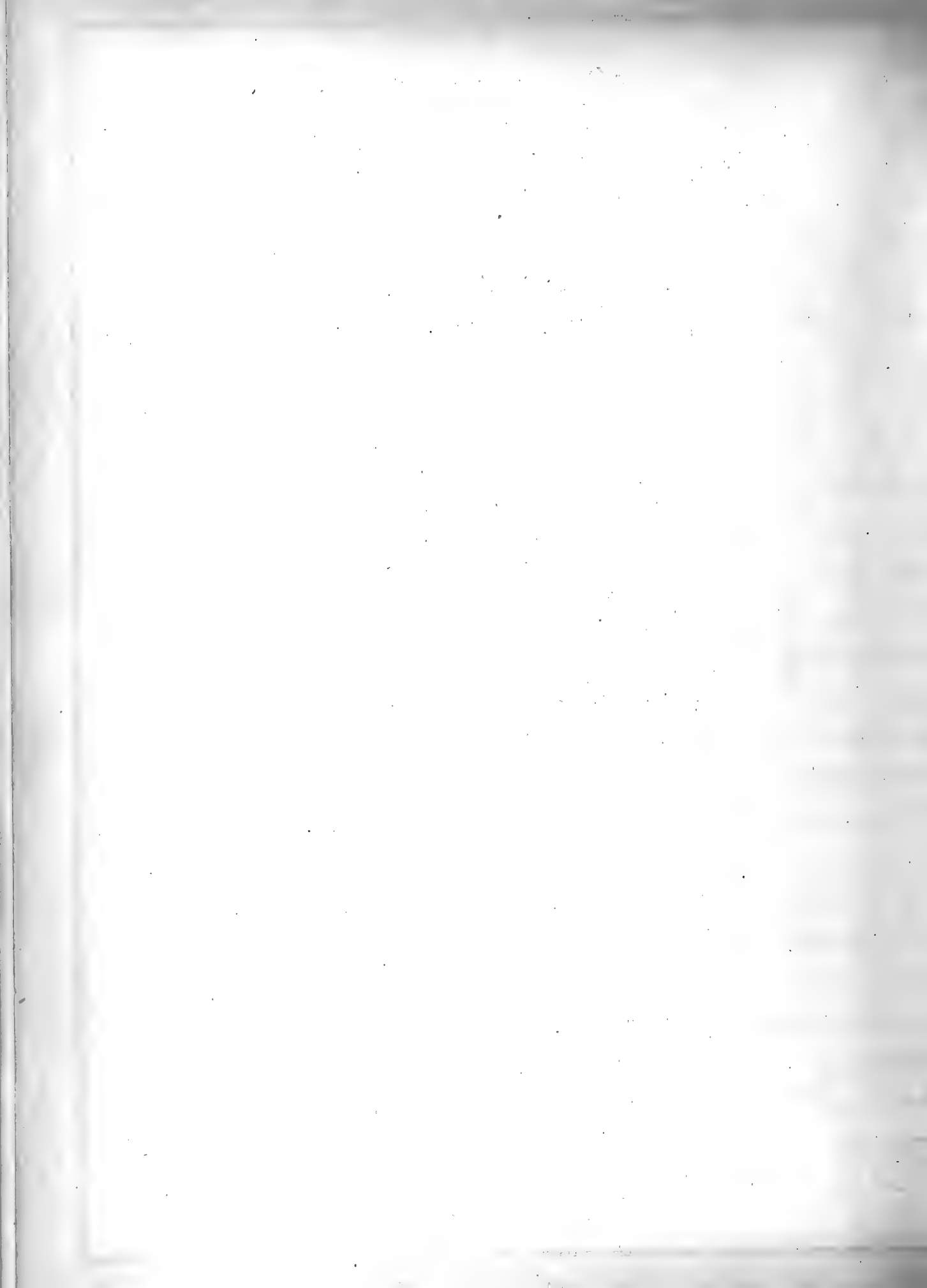
The vesper sparrow was very abundant in the open fields during our trip from Harvey to Brownsville, March 26 to April 11. About seventy five percent of them were found in pastures and stubble, more than half the total number in the latter. A large number of vesper sparrows in company with prairie horned larks were seen feeding April 5 in the stubblefield illustrated by figure 1, plate XXII, - a photograph taken south of Robinson, Crawford County. Evidently the birds found an abundance of food on these seemingly barren and desolate fields. Several were noticed on our trip from Anna to Carbondale, November 5 to 7, but none were recorded during the summer, between June 4 and July 1. This bird is, however, a summer resident in central and northern Illinois, the numbers



increasing very noticeably as one goes northward. July 22 a nest of the vesper sparrow containing three eggs was found near the center of an extensive cornfield two miles south of Clinton, DeWitt County. This nest and its surroundings are beautifully illustrated by a series of three photographs, figures 1 and 2, plate XI, and figure 2, plate XXIV. It was placed in the grass seen in the foreground of figure 2, plate XXIV. This view also shows, incidentally, the condition and stage of growth of the corn at that time. The other figures show clearly the immediate surroundings, and exhibit the structure of the nest and the markings of the eggs. The set was complete as the eggs were in an advanced stage of incubation. The two figures 1 and 2, plate X, illustrate similarly a nest found about two miles west of Belvidere, Boone County, in the northern part of the state. This nest was in a hay field which had been mowed a few days before our visit, and it seemed a miracle that it escaped the procession of the mower, the rake, and the feet of the horses and men, all of which must have passed dangerously near to the little home.

542a. *Passerculus sandwichensis savanna* (Wils.). Savanna Sparrow.

The savanna sparrow was occasional in the pastures and stubble between Cairo and Anna, October 30 to November 5. A male was taken November 3 from a small flock that was feeding on the seeds of some tall weeds at the margin of an orchard, about one and a half miles southeast of Anna. During the trip from Harvey to Brownsville, March 26 to April 11, those birds were common in the open fields, especially in the meadows and weedy stubblefields. A specimen was taken April 9 from a flock of seven that was flushed from a field of prairie grass near Mount Carmel, Wabash County, and



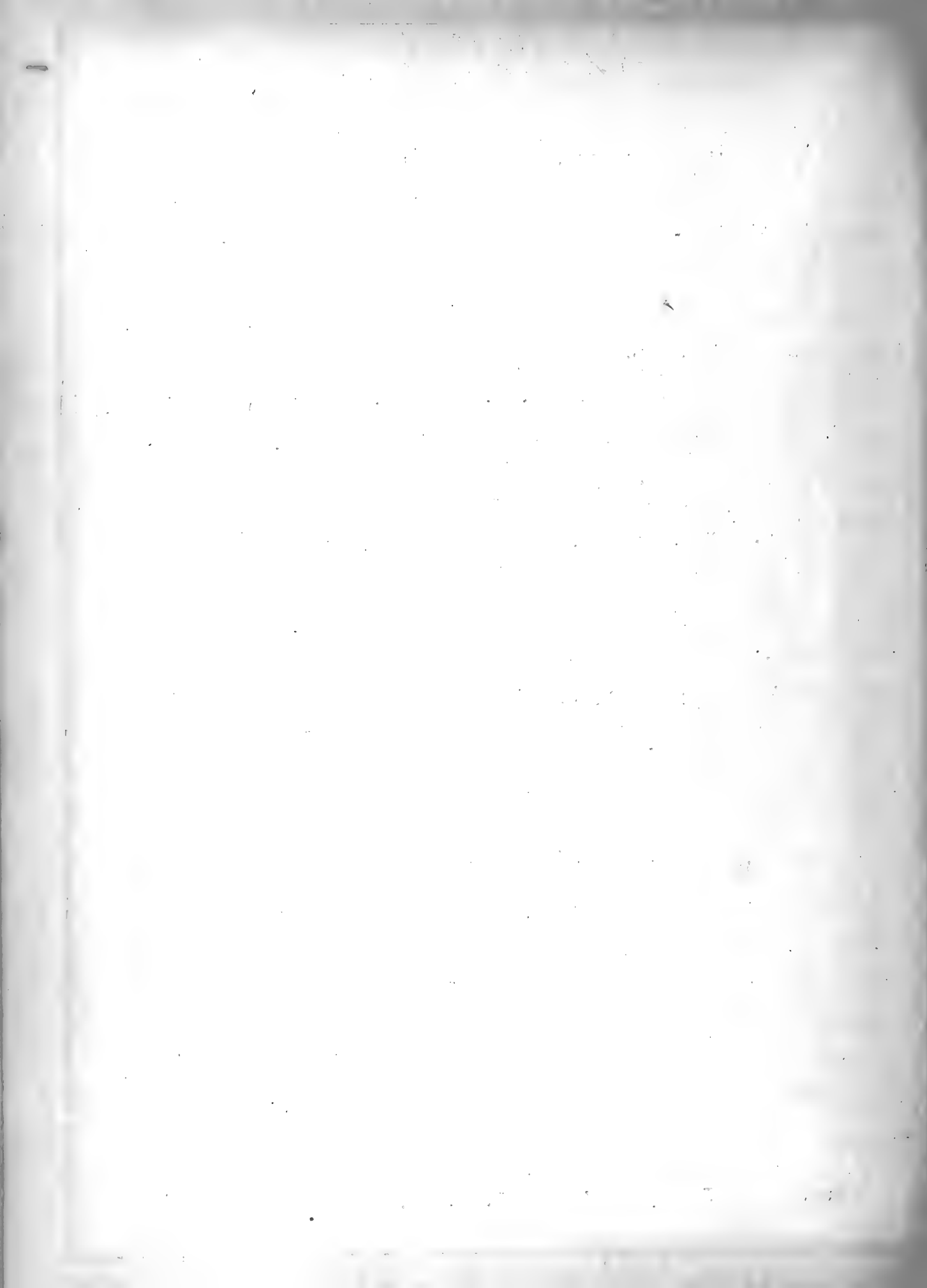
on the same day one was shot near Sugar Creek, where it was flushed with a large number of others from an alfalfa field. On April 11 seven were seen, one of which was killed, in a clover field south west of Carmi, White County. Fields containing a dense growth of grass or clover seem to be most attractive to this bird.

The paler, western subspecies, alaudinus, was taken in Shannon County, Missouri, March 22, 1907, by Mr. E. S. Woodruff. All of the specimens collected by us in Illinois, however, proved to be the usual eastern form P. s. savanna.

546. *Coturniculus savannarum passerinus* (Wils.). Grasshopper Sparrow

The grasshopper sparrow is a summer resident of southern Illinois. We found them common during June 4 to July 1. They were most abundant in meadows, and in pastures where the grass was not closely grazed, and a few were seen in wheat fields. E. W. Wilson reported them common on Fox Prairie, Richland County¹, but found them to be very rare in the vicinity of Mount Carmel, Wabash County, July 1875. One was seen October 31 in a stubblefield near Mound City, Pulaski County, which was the only one noticed by us on the trip from Cairo to Pana, October 31 to November 16. A specimen was secured in a timothy field near Brownsville, April 11, and another was shot and three were seen in a clover patch, also near Brownsville. From a study of the habits of this bird, it is evident that many escaped our notice. While we were watching the bird most carefully it would manage to conceal itself, and its colors harmonized so perfectly with its surroundings that it was difficult to distinguish even at a distance of a few yards. We

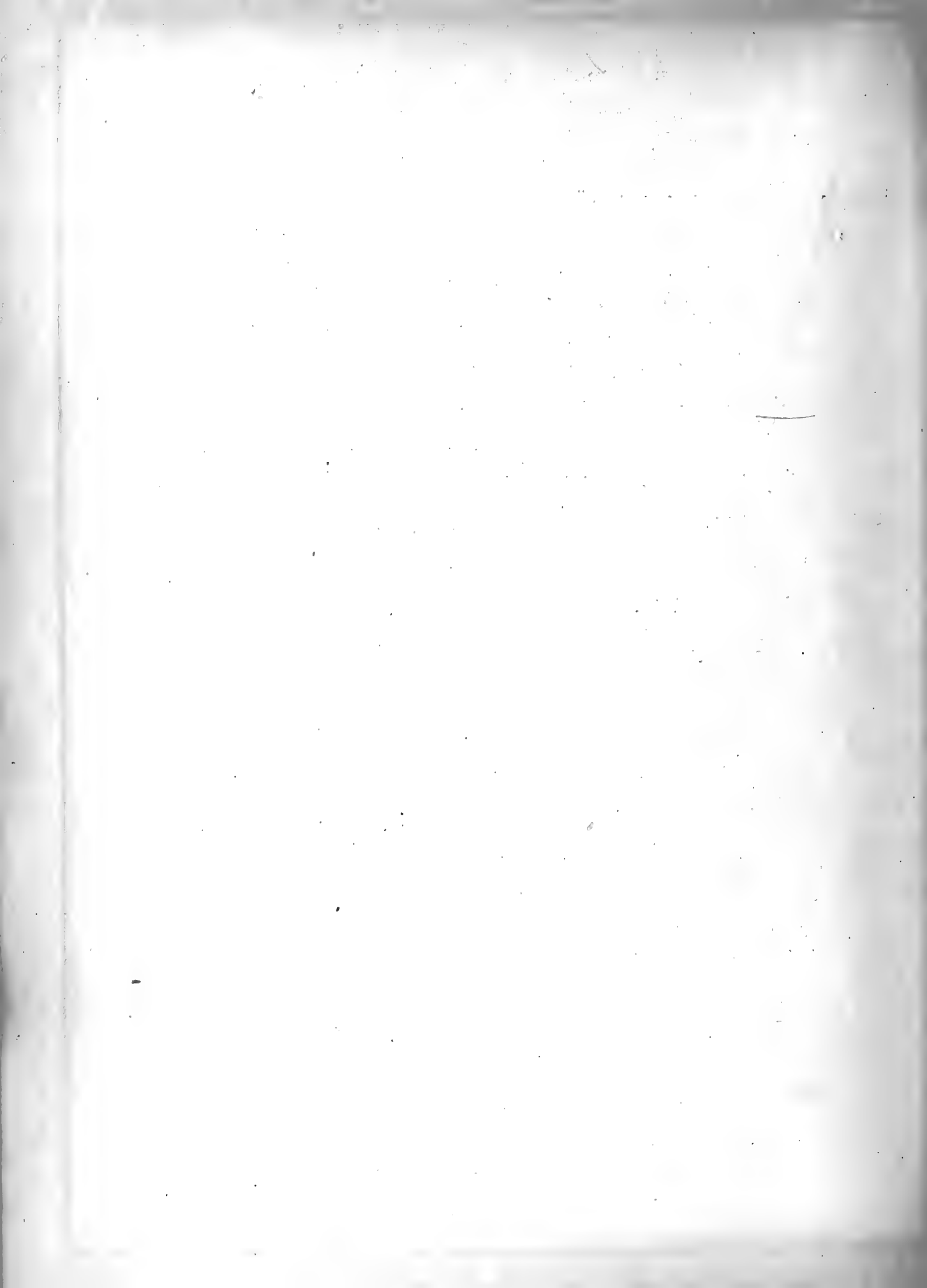
¹Bul. Essex Institute '77, vol. 9, pp. 38 and 49.



discovered more than seventy five percent of these birds by having our attention first attracted to their whereabouts by their characteristic insect-like notes, which Chapman vividly describes "pit tuck, zee-e-e-e-e-e-e-e." The first part of their song, pit tuck, when once learned, is so clear and distinct that it never fails to reach the receptive ear, even when there is a chorus of noisy dickcissels at the same time. Figure 2, plate XII, is a photograph of a nest found, May 22, in a central Illinois alfalfa field near Urbana, Champaign County. These nests are usually well concealed in a dense growth of grass, clover, or alfalfa, and the parent bird is so clever in escaping from her treasures unseen, that it is very difficult to locate the nest. All the nests that we happened upon were found by surprising the bird when walking rapidly through the fields. It is evident that the grasshopper sparrow and other closely allied species of similar habits, are more abundant than is generally supposed.

547. *Ammodramus henslowii* (Aud.). Henslow's Sparrow.

A Henslow's sparrow was killed November 9 in a weedy stubble field near the city limits of Centralia. It was about five o'clock in the afternoon when the bird was first seen, and in the hazy twilight it was impossible to distinguish any of its markings. It was flushed repeatedly and each time it flew but a short distance, skimming along near the tops of the weeds, but always alighting in the stubble entirely out of sight. It was difficult to flush the bird, as it sometimes allowed us to come within a few feet before rising. It had a tendency also to run from its place of alighting, increasing the difficulty of flushing it. After several futile shots, we succeeded in killing it on the wing.



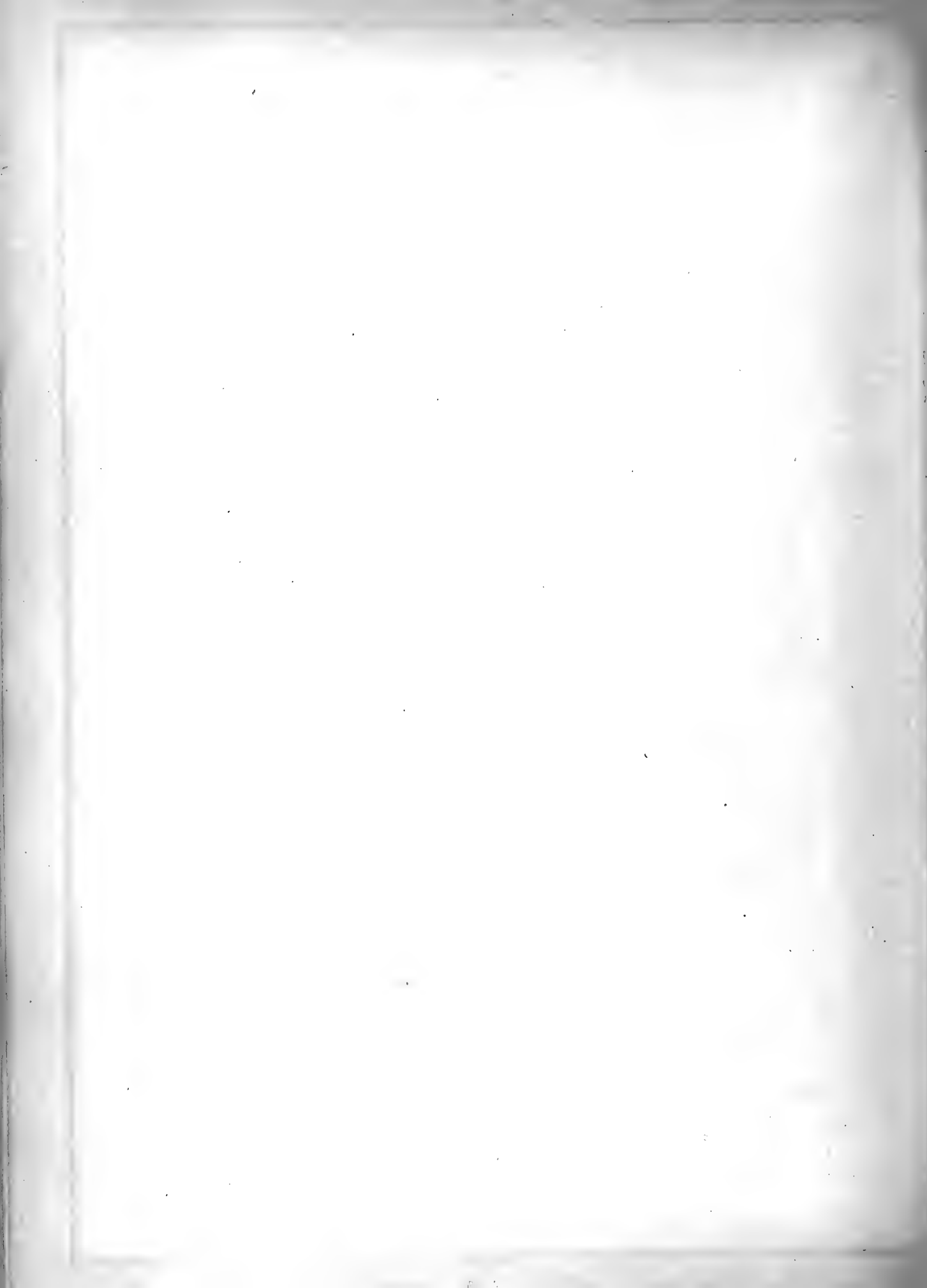
E. W. Wilson reported it common at Fox Prairie, Richland County¹, July 1875; and Robert Ridgway found it somewhat abundant on Sugar Creek Prairie² of the same county, October 27 and 28, 1882.

552. *Chondestes grammacus* (Say.). Lark Sparrow.

This species is a common summer resident throughout southern Illinois. It was most abundant in pasturelands where there was more or less low shrubbery and vines such as those shown in the foreground of figure 2, plate XXVII. Clearings where the brush stumps and sprouts remained, seemed to be ideal reports for this species, but it was not uncommon in cultivated areas, such as fields of oats and corn which it often chose for its nesting place. Figure 2, plate XIII, is a photograph of a nest found June 10 in a field of young oats a mile north of Johnston City. The nest was on high ground - a fortunate circumstance at this time, as practically all the nests on low land were flooded and destroyed by the heavy rains of that week. This nest was in a natural depression of the ground, and was partially hidden by a young dewberry vine which we pulled to one side before making the photograph. When the female flew from the nest, she imitated a wounded bird so perfectly as to be very deceiving. Usually this bird will run some distance from the nest before flying, but in this case she was suddenly surprised and resorted to the best means she knew to lead her supposed enemies aside. The parent birds earnestly watched us as we took the photograph, but showed no signs of excitement other than an occasional chirp. On returning to the nest, instead of flying directly to the spot, the

¹ Bul. Essex Institute '77, vol. 9, p. 49.

² Bul. Nuttall Ornithological Club '83, vol. 8, p. 58.



the lark sparrow flies to a point some twenty five or fifty yards away and then cautiously comes back. One bird which we watched from a place of concealment took fully fifteen minutes to return to her treasures. Running a few feet, she would peep out of the grass, which was three or four inches high, and carefully survey the surroundings in every direction and when sure that the way was clear she would proceed a little farther and repeat the performance. This she continued until within a few feet of the nest, where she stopped as before and carefully watched for several minutes, finally disappearing suddenly and darting through the grass directly to the nest.

554. *Zonotrichia leucophrys* (Forst.). White-crowned Sparrow.

The white-crowned sparrow was not a common bird during our visits to southern Illinois. One was seen November 1, in company with a number of slate-colored juncos, in the dense shrubbery of an open timberland near Villa Ridge. Mr. Ray secured a specimen, November 8, in immature plumage, in a briar patch east of Carbondale, and a second specimen also of immature plumage was taken by us the following day in an old orchard about a mile north of Ashley, Washington County. This bird usually associates with white-throated sparrows or with others of its kind, but was a solitary in these three instances. Three adults were seen, April 6, in a hedge row at the margin of an oat field near Lawrenceville, Lawrence County.

558. *Zonotrichia albicollis* (Gmel.). White-throated Sparrow.

The white-throated sparrow was one of the most conspicuous birds in the woodlands and thickets of shrubbery between Cairo and Anna, from October 31 to November 5. It was excessively



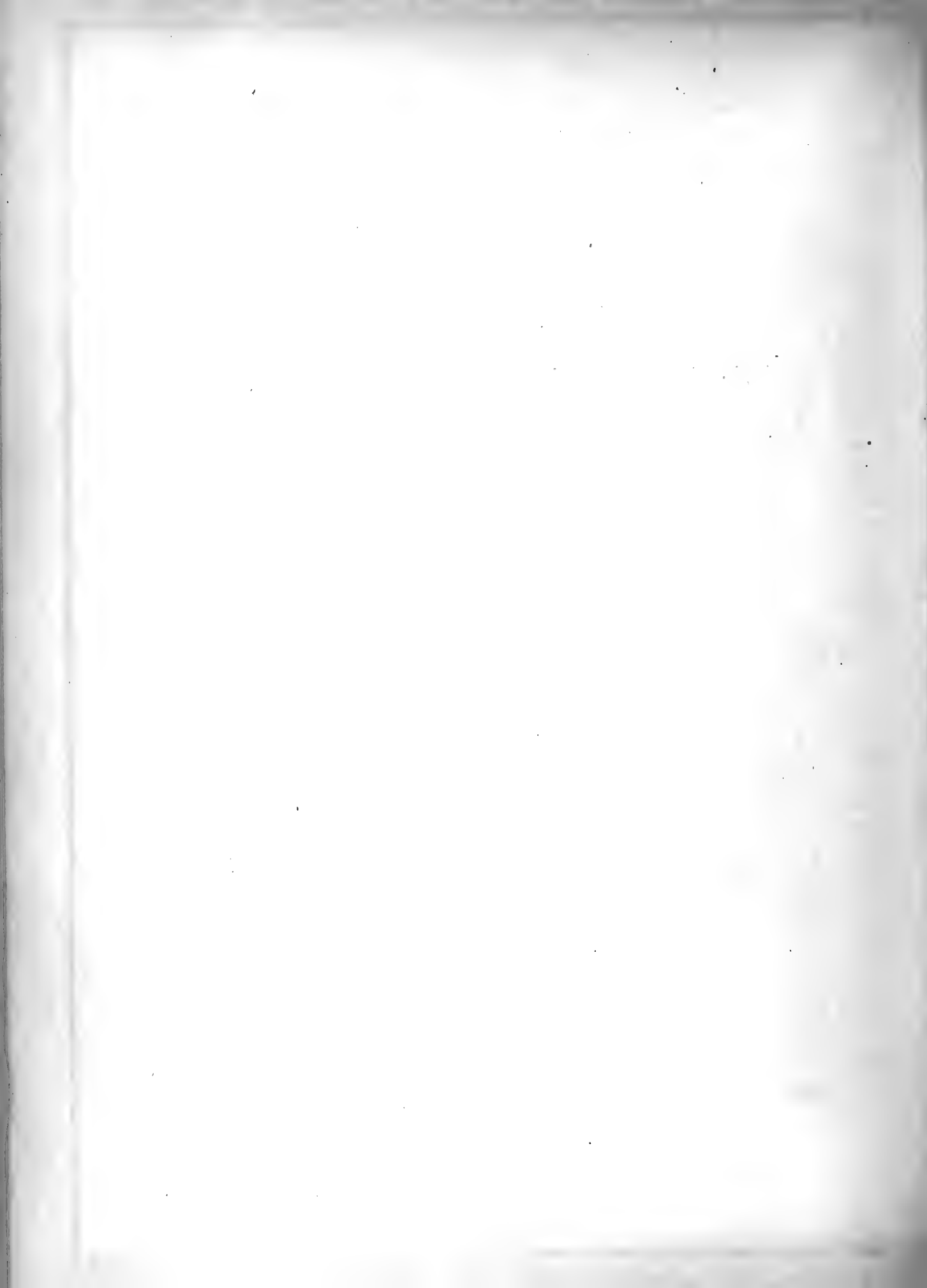
abundant in the lowlands southwest of Cairo and in the shrubbery and weed covered fields along the Ohio River levee from Cairo to Mound City. Several small flocks were seen February 6 in the ravines among the wooded hills in Alexander County between Thebes and Tamms. No others were seen during February 6 to 21, excepting a lone individual that chose to spend the winter in a cypress swamp north of Round Knob, Massac County. I saw eighteen of them December 28, 1907, in a blackberry thicket in northeastern Union County, near Running Lake. They were in full song at Olive Branch, Alexander County, between December 31, 1907 and January 3, 1908; and were common in the luxuriant growth of shrubbery along the roadsides in the ravines among the hills and in the cypress jungles at Horse-shoe Lake.

559. *Spizella monticola* (Gmel.). Tree Sparrow.

The tree sparrow was not as abundant as in the more northern parts of the state, but was generally and widely distributed from Thebes to Eldorado during February 6 to 21. It was usually seen in the open fields, or at the margin of the forests where there was an abundance of weeds, which afford a large part of their winter food supply. None were seen during the trip northward, from Cairo to Pana, October 31 to November 16, until we reached Marion County, but after that time they were comparatively common. One was noticed near Keensburg, Wabash County, as late as April 9.

560. *Spizella socialis* (Wils.). Chipping Sparrow.

This well known bird and frequenter of our door yards, was rarely found in the woodlands and fields, but was common only in the vicinity of dwellings. Five records were made during the trip from Cairo to Pana, October 31 to November 16, the last being seen



November 9 near Irvington, Washington County. Only fifteen were recorded in the quantitative work in southern Illinois, June 4 to July 1. Figure 2, plate XII, is a photograph taken May 24 of a nest built in the upper fork of a low, densely foliated pine tree, which stands on the University campus at Urbana.

563. *Spizella pusilla* (Wils.). Field Sparrow.

The field sparrow is a common, permanent resident of extreme southern Illinois, but it is much less abundant during the midwinter months. On the morning of February 6, one of these birds was found in a protected ravine among the wooded hills near Thebes. This lone bird was in company with numbers of cardinals, tufted titmice, golden-crowned kinglets, and white-throated sparrows. The morning was clear and as the sun beamed through the trees and warmed the chilly air it seemed to revive the spirits of this secluded company. The cardinals chased each other through the leafless shrubbery, their brilliant plumage contrasting with the white, glistening background of the snow. The golden-crowned kinglets performed their acrobatic feats on the slender twigs as nimbly and gracefully as if they knew that they were being watched and admired. The tufted titmice whistled an incessant Pe-to! Pe-to!, occasionally borrowing one of the chickadees calls for variation. The white-throats gave their plaintive calls; and then from a tree on the summit of a neighboring hill came the clear echoing notes of the mockingbird. In all this festivity and merry-making, the field sparrow added nothing to the chorus of lively songsters except an occasional pessimistic chirp. It was a different bird from the field sparrow we greet in the spring, or the one that nests in our pasturelands in summer. Eight others were seen during our winter



statistical studies in southern Illinois. Three of these were found south of Golconda, Pope County, in a forest protected by surrounding hills and containing an abundance of underbrush and shrubbery. The other five were seen February 18, in an old deserted orchard near Hartsville, of the same county. The latter were perched on a brush heap, where they were peacefully arranging their feathers and enjoying the warm afternoon sun.

I collected specimens of the field sparrow and found them not uncommon in the dense growth of blackberry vines and shrubbery along the roadsides and in the ravines among the wooded hills during a trip made to Olive Branch, Alexander County, from December 30, 1907 to January 3, 1908. They were usually in company with juncos and song-, tree-, and white-throated sparrows. The field sparrows seen here never sang, even under the most favorable conditions.

During the spring and summer this was one of the most abundant of the sparrows. Old pasturelands where dewberries or other shrubbery abound are their favorite haunts; and a field of the kind illustrated by figure 2, plate XXVI, is likely to contain one or more pairs of them. Such a field as this is intermediate between bare pastureland and dense timber, and, offering an unlimited number of favorable nesting sites and a large supply of food, it presents an ideal situation for an abundance and variety of bird life. Two pairs of field sparrows were nesting in the field illustrated by figure 2, plate XXIX. A nest containing three young was found on the ground under the dewberry vine shown in the foreground of the above figure. When first seen, the female was on the nest and did not leave it until we had come within a few feet of her,



relying perhaps on her protective resemblance which, in this case, was very marked. The nest is shown at close range in figure 1, plate XV, and but little more than the wide opened mouths of the nestlings are visible. To make the young birds perform it was only necessary to tap the margin of the nest, when instantly the little heads bobbed up and the ever hungry mouths opened wide to receive the expected bit of dinner. The young birds did not have their sight as yet, and were deceived repeatedly, although no tempting morsel rewarded their efforts. The mother bird returned with a green larvæ in her mouth while we were taking the picture, and perched on a nearby shrub. She displayed the greatest confidence in us, and showed no anxiety until our visit seemed too prolonged, when she uttered a few petitioning chirps. She flew directly to the nest without the least hesitancy, as we left, and fed her nestlings while we watched her from a point only a few yards distant.

The nest shown in figure 1, plate XIV, was found on June 28 among some weeds of a poorly seeded cloverfield on the bluffs about two miles north of Golconda, Pope County. This nest contained two eggs and three newly hatched young. It was poorly shaded, and the young would have had no protection from the burning sun except for the faithful mother. She was very prompt in returning to her nest as soon as we left the place, and no doubt the young were well cared for at all times. The nest shown in figure 2, plate XIV, was placed about fifteen inches above the ground in a growth of dewberry vines. If the field sparrow is a lover of dewberries, she was wise in selecting such a convenient location. Two other field sparrow nests were found within a few yards of this one, and doubtless others were hidden in the same tangle of vines. There seems to be a tendency for the field sparrow to congregate



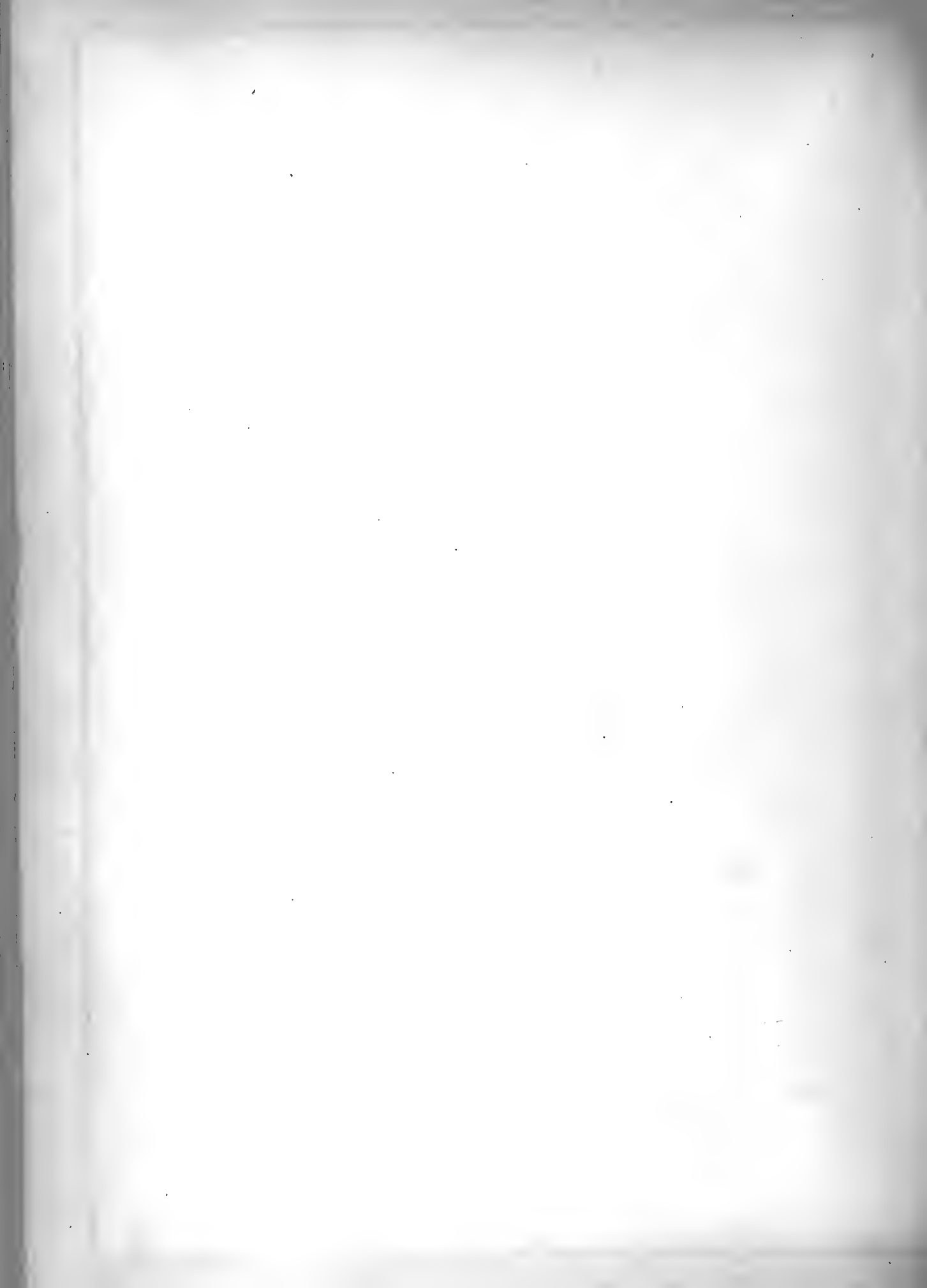
in small colonies, for most of the nests of this species found, were in close proximity to others of their kind.

567. *Junco hyemalis* (Linn.). Slate-colored Junco.

The slate-colored junco was by far the most abundant bird during our winter studies in southern Illinois, February 6 to 21. Their incessant yet cheerful and pleasing chattering was constantly heard along our course; and we traveled scarcely a mile without seeing several of these hearty creatures, feeding among the weed patches of the open fields, or flitting in and about the shrubbery and among the branches within some of the densest forests. They were usually associated with other species, such as white-throated and tree sparrows, and birds of similar habits. In the open fields, most of the juncos were in cornfields, which, in that section of the state, usually abound in weeds and grass. They were also among the commonest species recorded during the trip from Cairo to Pana, October 31 to November 16, and from Harvey to Brownsville, March 26 to April 11.

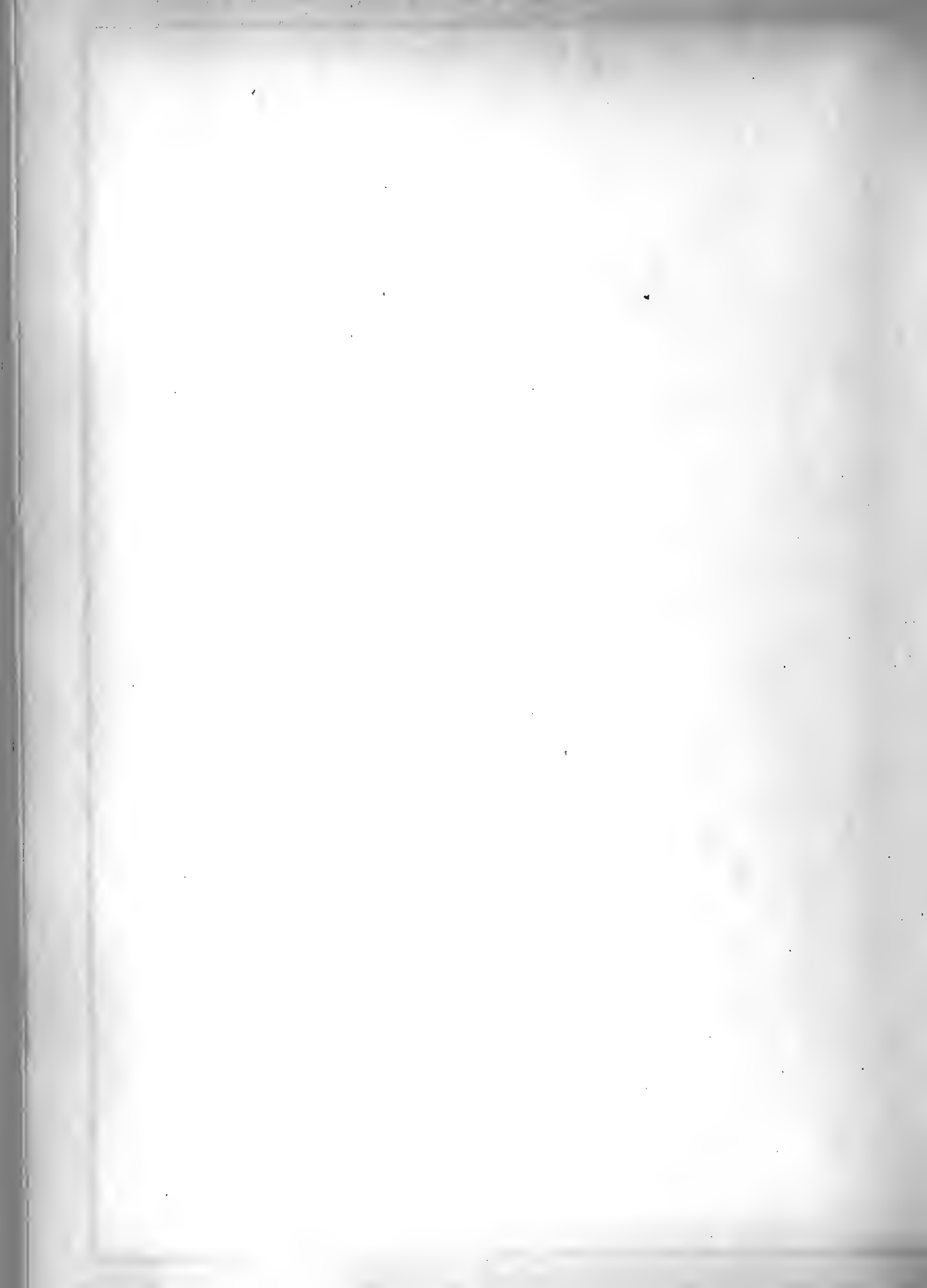
575a. *Peucea aestivalis bachmanii* (Aud.). Bachman's Sparrow.

On a trip from Carmi to Brownsville, White County, April 11, 1907, we found Bachman's sparrow not uncommon in old deserted fields which contained a few large trees and a growth of more or less dense shrubbery. A specimen was taken in the field illustrated by figure 1, plate XXII. When first seen it was feeding on the ground among the weeds and cornstalks seen in the foreground. Mr. Ray almost stepped on this bird before it sneaked away from its place of concealment. It ran along the ground for some distance, and finally flew to the lower branches of a large white-oak where it soon began its characteristic trill, so unlike



the notes of our other sparrows. The confiding songster repeated its song at short intervals for fully fifteen minutes, while we watched from a point but a few yards distant. It sang with its head uplifted, its beak thrown back, and it seemed to make every effort to please us. Two Bachman's sparrows were found June 6 in an old orchard five miles southeast of Gallatin, Saline County. The orchard was partially surrounded with a growth of timber, and more or less shrubbery grew among the trees and fallen trunks. When first seen, one of the birds was singing from the gable of an old dilapidated log-cabin which stood near the margin of the orchard,- an unusual place for this "oak woods" species. The other, probably a mate, was flushed from a nearby brush-heap which was partially hidden by a rank growth of weeds. We searched for a nest in the favorable places about the cabin, but were unable to find one. During our stay of about twenty-five minutes, the birds remained very near, but their occasional chirp gave us no clue to the location of the nest. Several were seen the following day near the Saline River, about four miles southeast of Harrisburg, Saline County. Here they preferred the tall shrubbery along the margins of the forests such as is illustrated by figure 1, plate XLIX. June 25 one was seen five miles northeast of Metropolis, in the scanty growth of sassafras shown in the foreground of figure 1, plate XXVI. Although no nests were found, it is probable that the bird nested in one of the several localities in which it was observed.

Bachman's sparrow was first reported from the lower Wabash Valley, by Mr. Robert Ridgway, who noted it early in June, 1871,



about half way between Mount Carmel and Olney, Illinois¹. He found it extremely local and quite rare at Mount Carmel during the spring of 1878². Messrs. E. W. Nelson and F. T. Jencks took several specimens, July and August 1875, in the vicinity of Mount Carmel, and on Fox Prairie in Richland County³. This bird is extending its range to the northward, and can no longer be considered a rare bird in central Illinois. O. C. Poling records in notes of the Fringillidae of western Illinois, the collecting of three specimens near Quincy in May, 1887⁴. One was killed at Urbana, Champaign County, by myself, April 7, 1905; and one was seen by Professor Frank Smith and members of his bird class on March 19 and 20, 1907. Mr. Ray and I saw two in an open woodland near Oakwood, Vermilion County, April 22, 1907. Others were seen during the month of April, 1908, in the vicinity of Urbana. Mr. I. E. Hess secured a nest and set of four eggs of this bird, a half mile west of Philo, Champaign County, May 27, 1896. The identification was verified by Major Bendire and Dr. Ralph, who say that this is probably the most northern record of its breeding.

581. *Melospiza cinerea melodia* (Wilson). Song Sparrow.

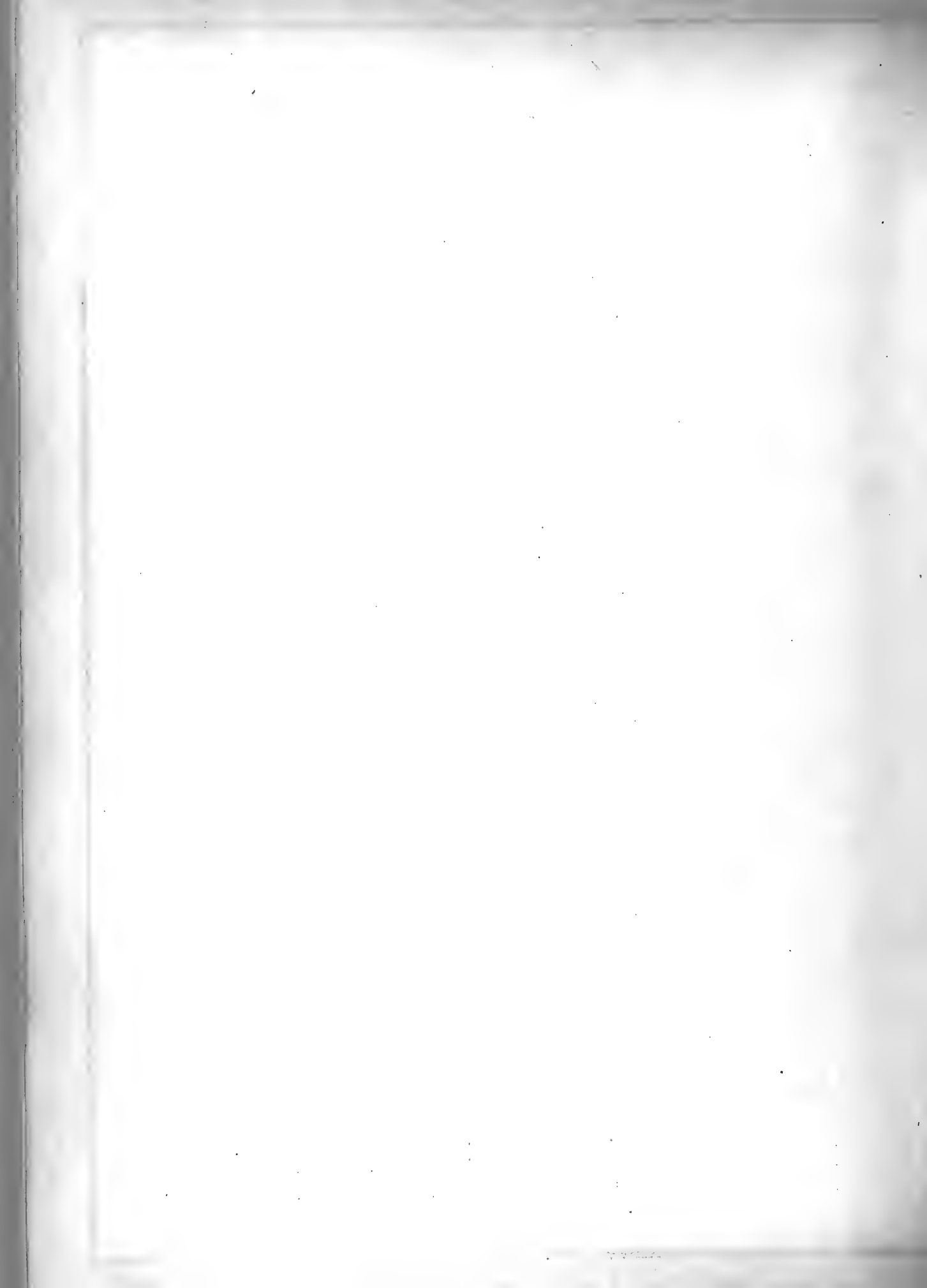
The song sparrow was common in southern Illinois, February 6 to 21, when it was oftenest met with in low, wet forests, and in the dense vegetation bordering the brooks and smaller streams. It was very abundant and in full song at Olive Branch, December 31, 1907 to January 3, 1908. Here it showed a decided preference for the cypress and the lowland timber in the neighborhood of Horse-shoe Lake, as illustrated by figures 1 and 2, plate

¹ Bul. Nuttall Ornithological Club '79, vol. 4, p. 220.

² Bul. Nuttall Ornithological Club '78, vol. 3, p. 164.

³ Bul. Essex Institute '77, vol. 9, pp. 38 and 49.

⁴ Auk '90, vol. 7, pp. 238-243.



XXXIX. It was not seen in southern Illinois from June 4 to July 1, 1907, but we have found it not an uncommon summer resident in the central and northern sections of the state.

583. *Melospiza lincolni* (Aud.). Lincoln's Sparrow.

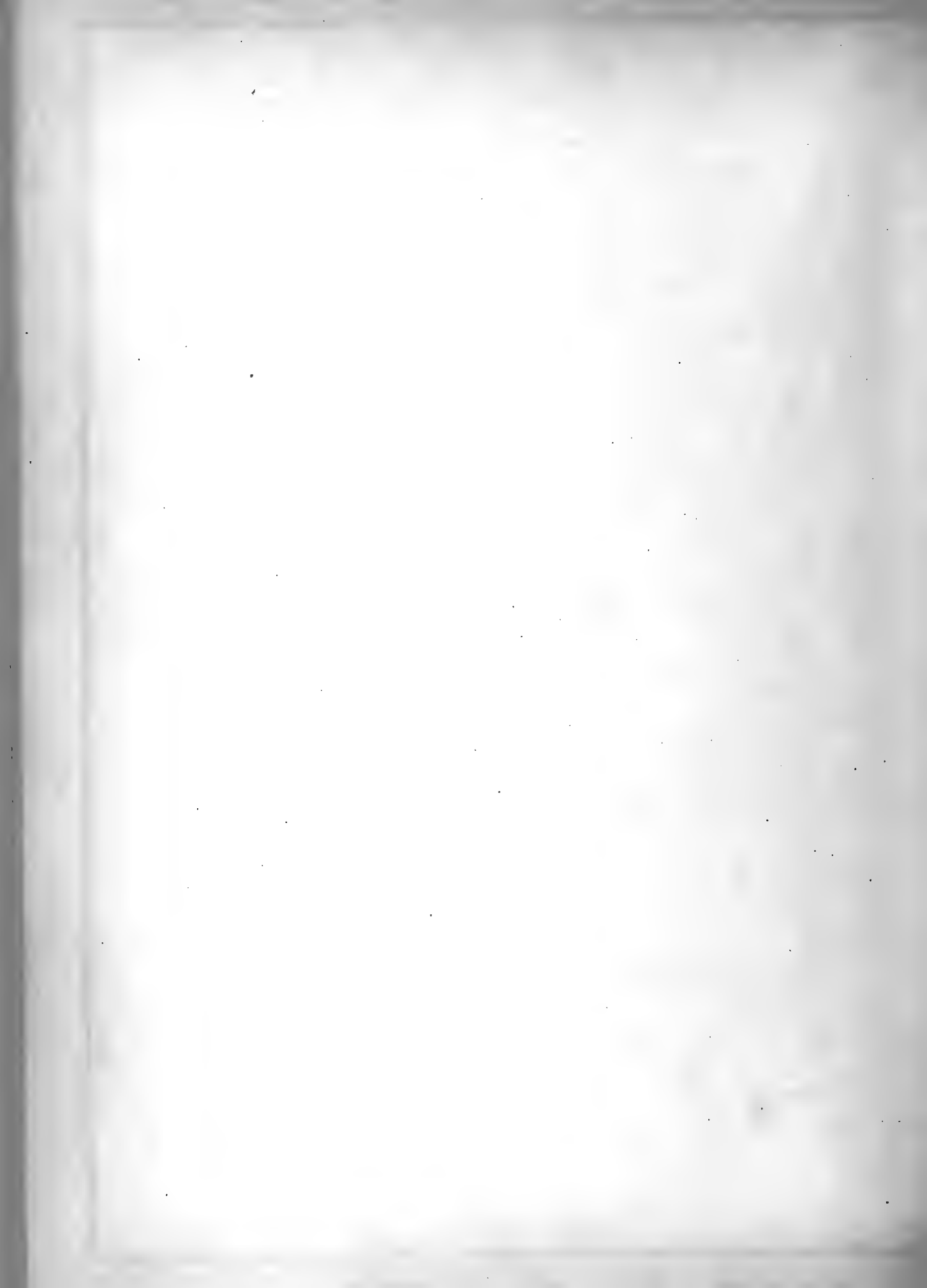
A Lincoln's sparrow was seen November 2 at the margin of a stubblefield near Wetaug, Pulaski County - the only one found by us in southern Illinois.

584. *Melospiza georgiana* (Lath.). Swamp Sparrow.

We found the swamp sparrow very common in the cypress swamps along the Cache River south of Ullin, on our trip from Cairo to Pana, October 31 to November 16, but it gradually diminished in numbers as we proceeded northward. One was seen February 21 in a grassy marsh southeast of Eldorado, Saline County - the only individual seen by us in February in southern Illinois. Two were seen, probably a breeding pair, in a weedy timothy field near Thompsonville, Franklin County, the only ones noticed during the summer. I secured a specimen, December 24, 1907, in a low, wet clearing east of Grand Tower, and on January 1, a flock of eleven was found in an open area in a piece of low, marshy timber near Horse-shoe Lake. The exact locality and surroundings are shown by figure 1, plate XXXIX. They were in company with a number of song sparrows, and most of them were feeding on the seeds of carex seen in the foreground.

585. *Passerella iliaca* (Merr.). Fox Sparrow.

The fox sparrow was found in small numbers on our trip from Cairo to Pana, October 31 to November 16, and on the winter trip made between February 6 and 21. January 2, 1908, many were seen among the bushes and in the tangled vegetation bordering Horse-shoe Lake.

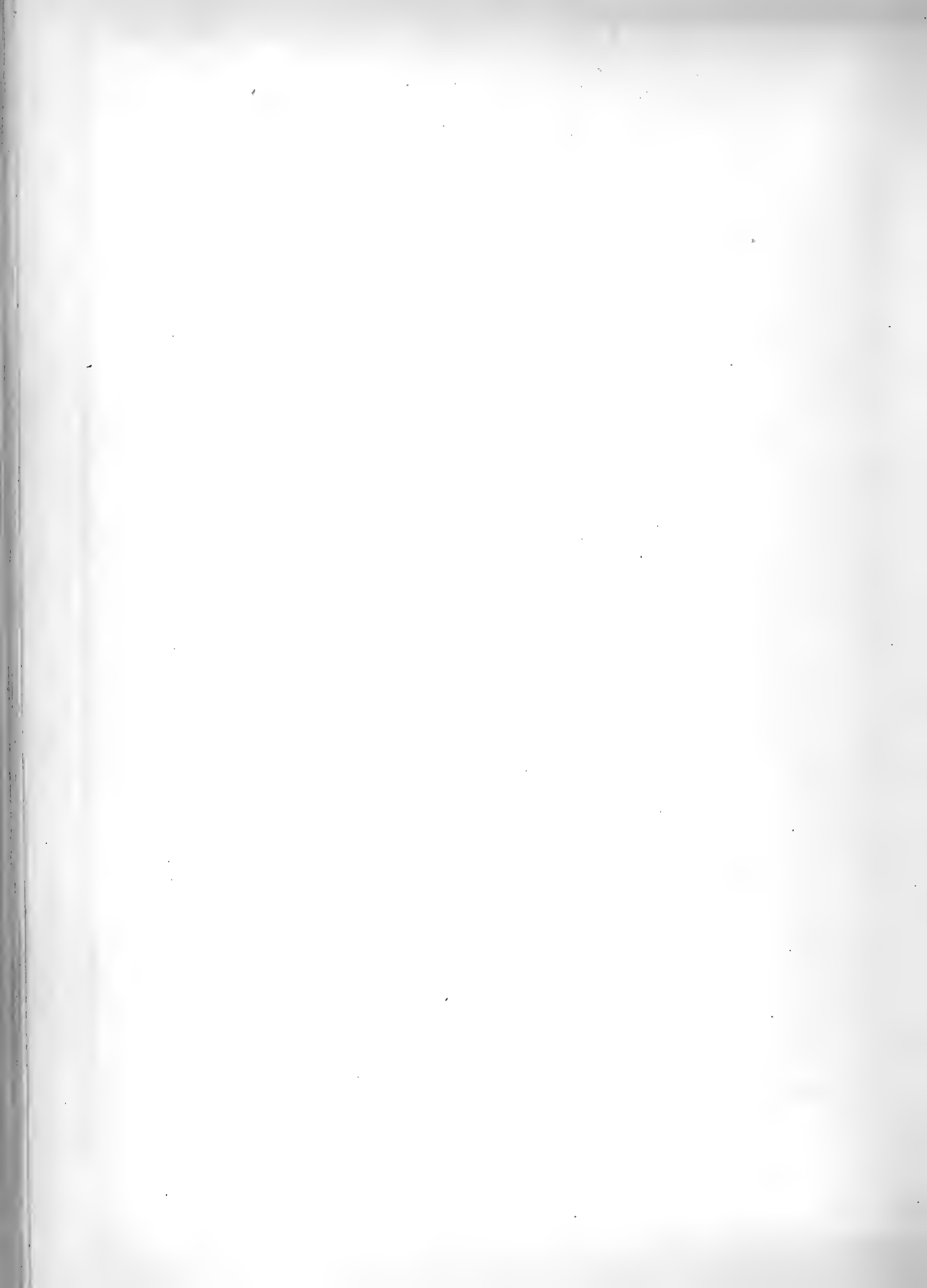


587. *Pipilo erythrophthalmus* (Linn.). Towhee, Chewink.

The towhee is a permanent resident in southern Illinois, and, although not abundant, it was encountered on every trip taken by us in that part of the state. Several were seen February 11 in the bottomlands along the Ohio River between Metropolis and Brookport. Here they preferred woodlands containing considerable shrubbery and many brush heaps, like those shown in figures 3 and 4, plate XLVI. Several were seen, and one was shot, December 28, 1907, at Running Lake in northwestern Union County. During the summer the towhee resorted to the cool, quiet woodlands the dense foliage of which dimmed the air, allowing only an occasional sunbeam to stream through. I vividly recall the keen pleasure we felt upon entering such a woodland on the afternoon of June 26, after several miles of travel through the dusty fields and under the burning sun. A male towhee which was vigorously scratching in the thick carpet of leaves beneath a clump of hickory saplings first attracted our attention. (Figure 1, plate XL.) Occasionally he uttered a sharp defiant che-wink!, che-wink!, intimating by his actions that his mate was not far off. We also heard here the clear, echoing notes of the woodthrush bidding us welcome, in an indescribably sweet melody, to his sylvan home.

593. *Cardinalis cardinalis* (Linn.). Cardinal.

The cardinal was common at all times in forests and in large tracts of shrubbery. It is more abundant in the southern third of the state than farther north because it finds there better protection and more attractive nesting sites. It was decidedly commoner in February than in June of the same year. At Olive Branch, December 31, 1907 to January 3, 1908, it was the most abundant bird-



conspicuous by their bright colors during all hours of the day but especially so at their feeding time, shortly after sunrise. On the crisp morning of January 2, I counted twelve males and five females at one place along the road from Olive Branch to the cypress swamps at Horse-shoe Lake.

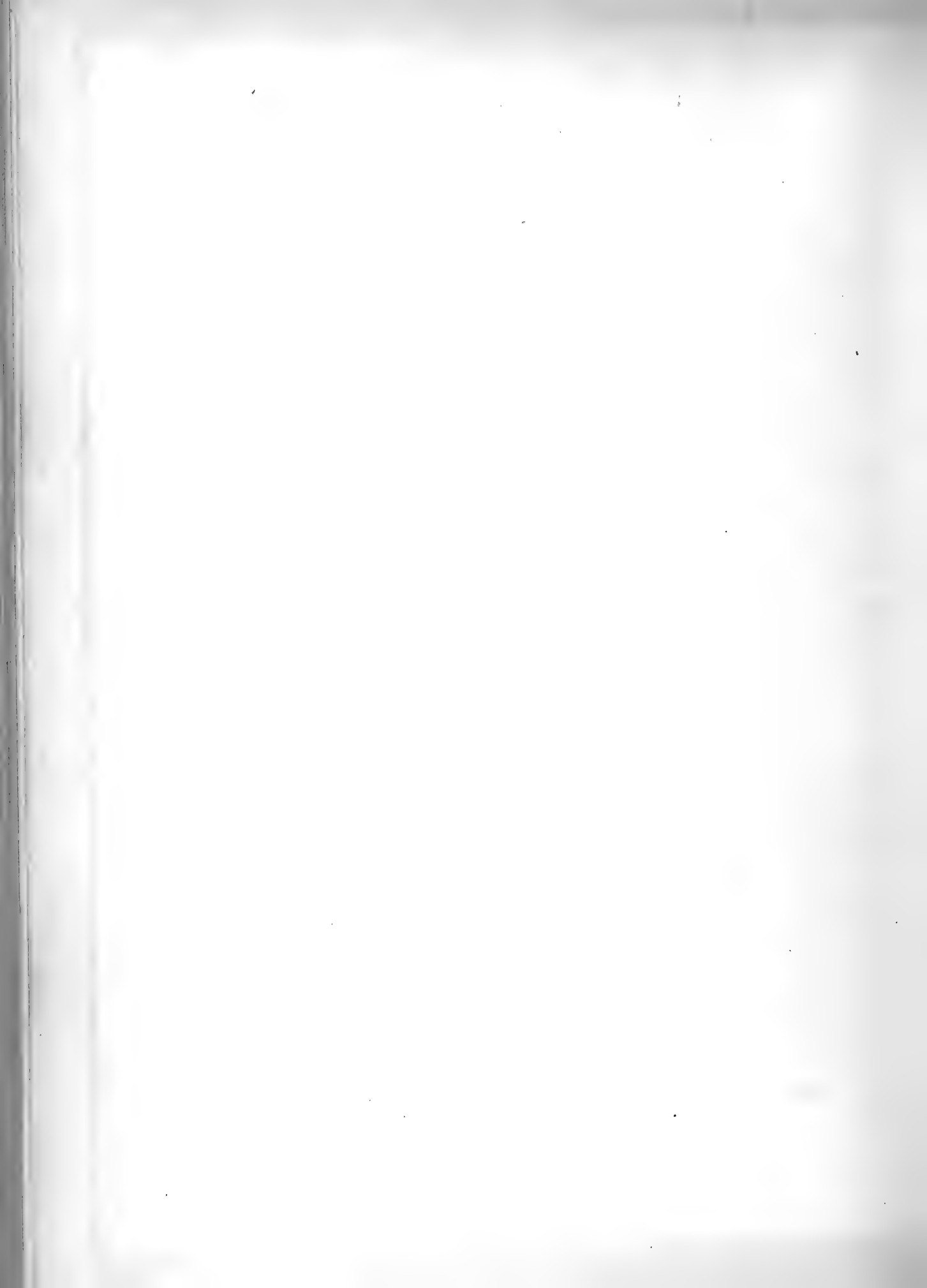
Figures 1 and 2, plate XVII, are photographs of a cardinal grosbeak's nest taken, June 15, 1907, in an orchard southeast of Benton, Franklin County.

598. *Cyanospiza cyanea* (Linn.). Indigo Bunting.

The indigo bunting was common and widely distributed in southern Illinois, June 4 to July 1. It was seldom found in the interior of dense forests, but frequented clearings and pastures containing sprouts, clumps of shrubs, and scattering trees, situations usually shared with the field and lark sparrows. A typical haunt of the indigo bird is illustrated by figure 1, plate XXX, a photograph taken June 10 near the Big Muddy, about three miles south of Benton. At this place many of these songsters were heard and seen, and several of them were nesting.

604. *Spiza americana* (Gmel.). Dickcissel.

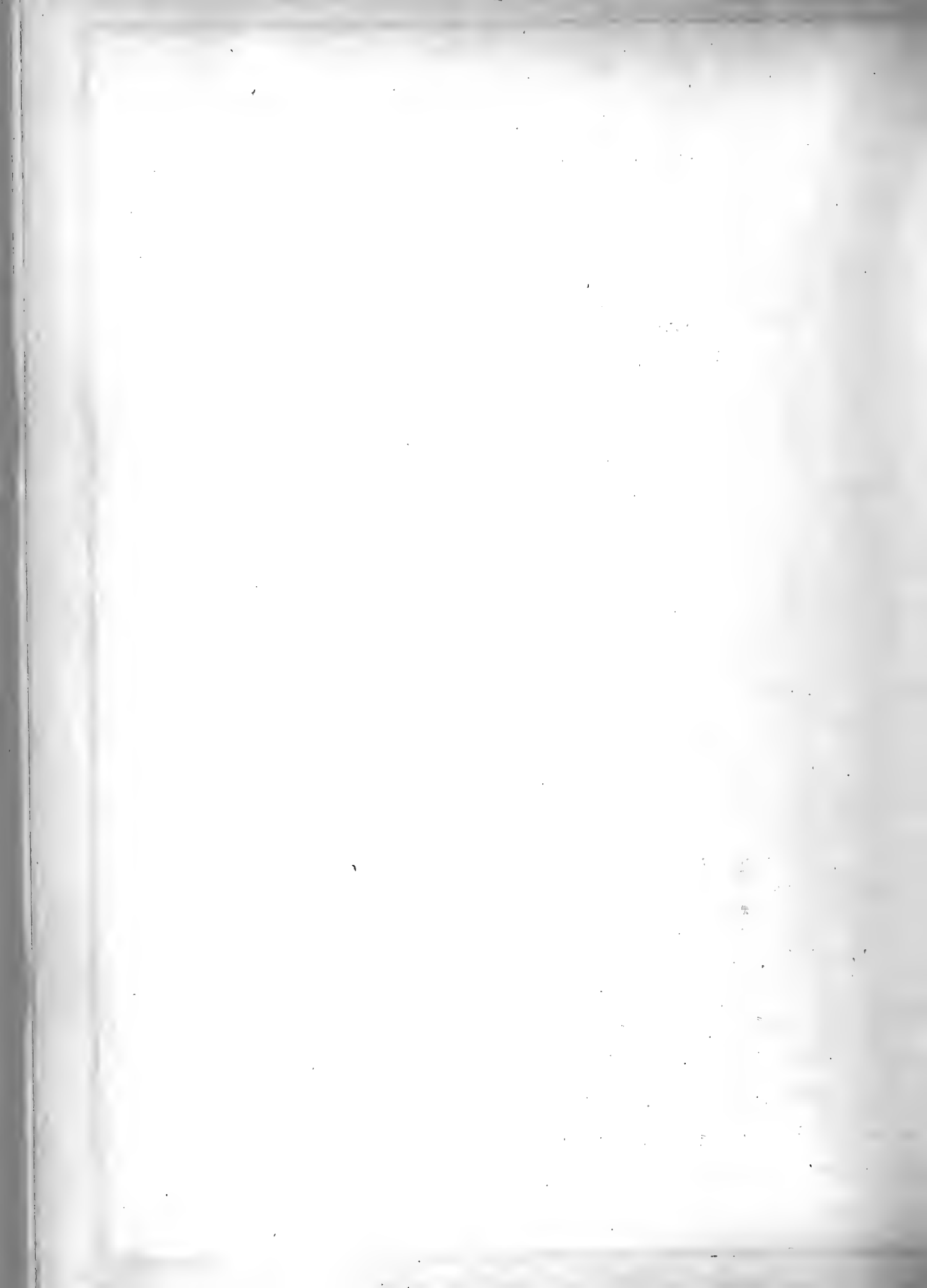
The dickcissel was one of the most conspicuous birds of the meadows and pastures during our visit to southern Illinois, June 4 to July 1. It made its presence known by incessantly calling with the deepest earnestness from the top of some weed or shrub. Even in the middle of the day, when most other birds sought the shade, it remained in the burning sun to proclaim its presence. For this reason it seems relatively much more abundant than some of the quieter species, such as the sparrows which seldom sing in the open fields. Figure 2, plate XXIII, is a photograph of a timothy



field near Smothersville, a typical resort, where two pairs were nesting near a meadowlark's nest. The nest seen in figure 2, plate XVI, was in the rank growth of timothy shown in the foreground. It was built near the ground and was supported and protected by the surrounding grass and weeds. Figure 2, plate XV, is a nest in an unusual place for this species. It was built about three feet above the ground in a blossoming rose bush, a most beautiful situation for this little home. The rose bush was in a boggy pasture, and it was probably the wet condition of the field which caused the bird to build so high from the ground. The nest illustrated by figure 1, plate XVI, was found June 6, in a timothy field south of Galatia, Saline County. This is the neatest and best constructed nest found by us in southern Illinois. It was so well hidden by the tall grass and the overhanging dewberry vine that we should never have discovered it if the parent bird had kept her place. The eggs of this species varied in number, five being as common as four.

610. *Piranga rubra* (Linn.). Summer Tanager.

Three records were made by us of the occurrence of the summer tanager, but none for the commoner scarlet tanager, during our visit to southern Illinois, June 4 to July 1. A male was seen, June 14, in a narrow wooded ravine near Whittington, Franklin County, and both a male and a female were seen June 20 near Christopher of the same county, in the highland timber illustrated by figure 1, plate XXXV. This pair kept to the upper branches of the tall oaks and hickories, flying leisurely from tree to tree, uttering no calls and giving no indications of nesting. Several were seen June 29 along the roadway illustrated by figure 2, plate XLIV.



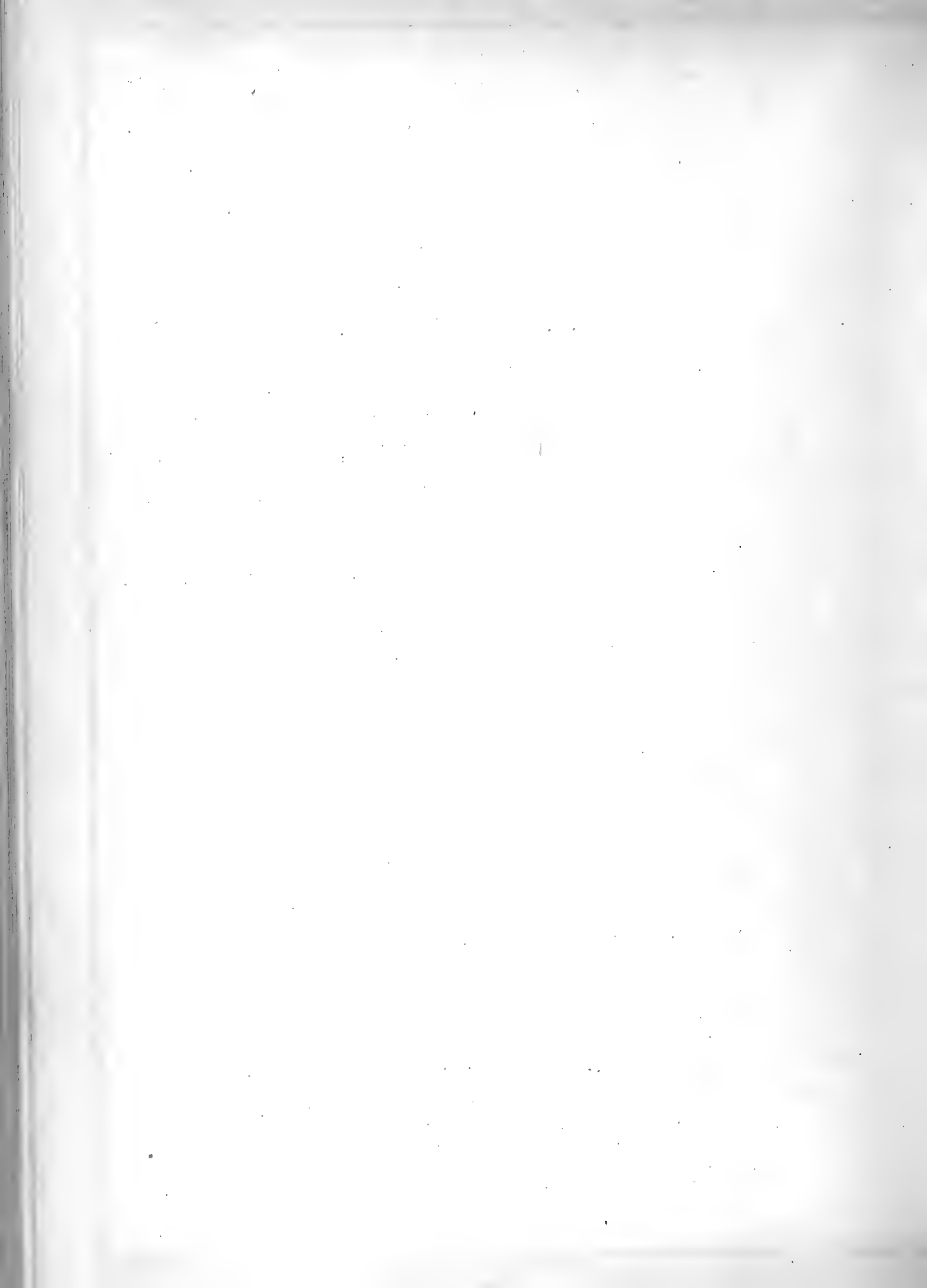
This undulating road led through a dense hilly forest near the Ohio River east of Shetlerville, Hardin County (Figure 1, plate XLIV). These tanagers crossed and recrossed our path several times, but it was difficult to follow them in the dense undergrowth. The woodthrush and the carolina wren were also here and the liquid notes and ringing calls lent an enchanting to the lonely solitude.

611. *Progne subis* (Linn.). Purple Martin.

The purple martin was not common and the few seen were widely distributed over the area covered by us in June. They were usually seen skimming over the open fields, like swallows. A small colony was nesting in a bird house on a farm near Homberg, Pope County - the only instance noticed of their nesting in a place prepared for them. There were many bird boxes on the farms, but, with this exception, all were occupied by the English sparrow, which was probably keeping the martins away. The following is a complete list of purple martin records made by us in the course of our work in southern Illinois:- Two, June 10, in an oatfield near Benton; two, June 18, in a pasture at Tamaroa; one, June 20, in a pasture near Duquoin; two, June 26, in a barnyard west of Homberg; one, June 29, near Elizabethtown; one July 1, in a corn field, and another in a meadow near Cave-in-Rock, Hardin County. While stopping at Elizabethtown, several of them, in company with numbers of swallows were seen flying up and down and skimming over the wide expanse of the Ohio.

612. *Petrochelidon lunifrons* (Say.). Cliff Swallow.

A small colony of cliff swallows was seen, June 21, on a farm south of Duquoin, Perry County - the only ones seen by us in southern Illinois. Figure 1, plate XXI, illustrated the shape and arrangement of the nests of a colony found July 24, near Bar-



clay, Sangamon County, in central Illinois. At the time of our visit, the majority of the nests (about thirty), were occupied by half-grown fledglings, whose constant demands for food must have taxed the parent birds to the utmost. Although the species was abundant in some places, its distribution throughout the state was very local.

613. *Hirundo erythrogaster* (Bodd.). Barn Swallow.

But two records of the common barn swallow were made by us in southern Illinois. One of those birds was seen April 11 in a wheat field southwest of Carmi, and June 29 a few were circling about over a pasture near Elizabethtown, Hardin County.

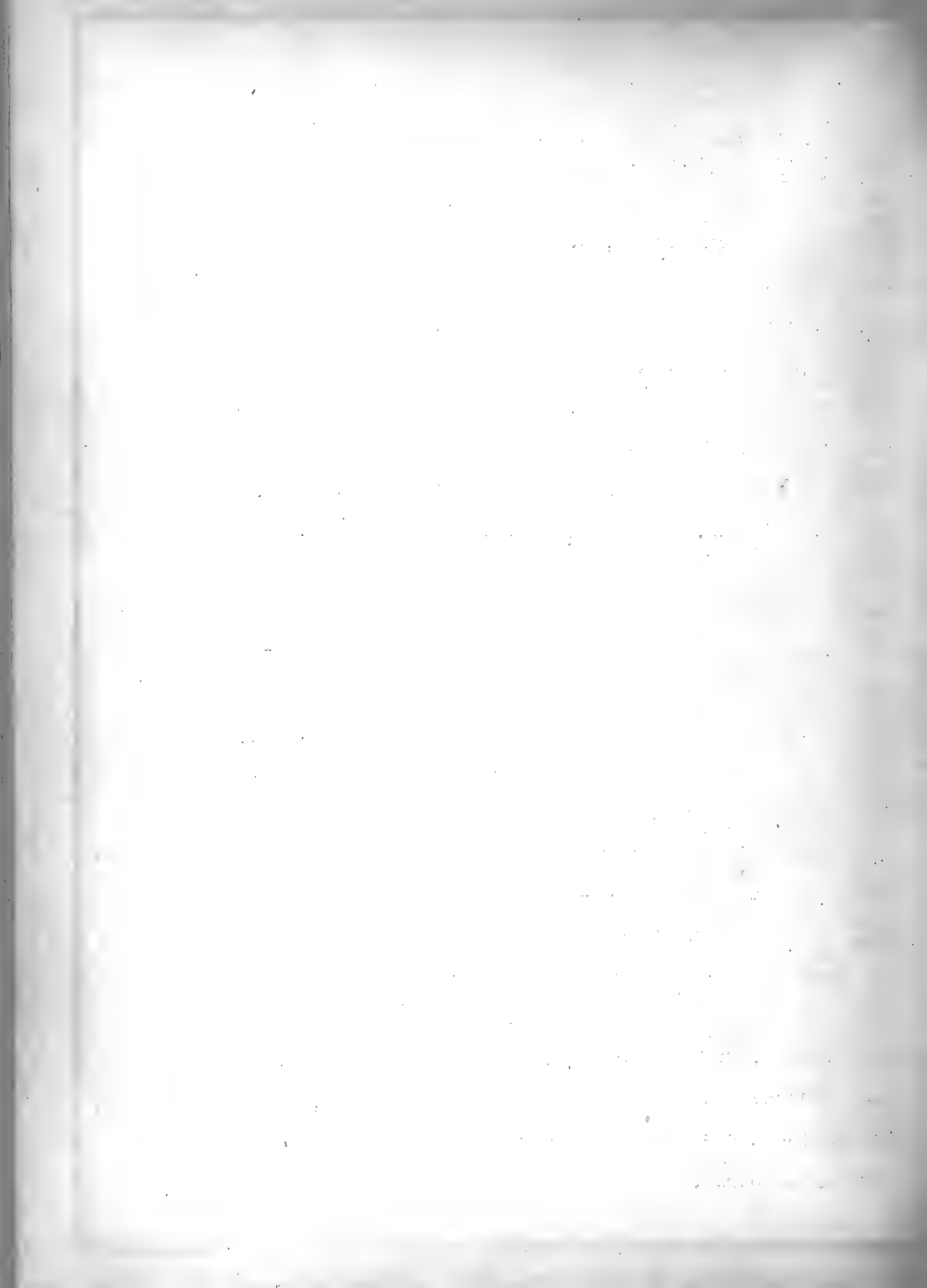
616. *Riparia riparia* (Linn.). Barn Swallow.

No bank swallows were noticed at any distance from the large rivers, but they were common along the Ohio at the various points visited between Metropolis and Cave-in-Rock, from June 25 to July 1, 1907.

622e. *Lanius ludovicianus migrans* (W. Paler.). Migrant Shrike.

(Northern Loggerhead Shrike)

The migrant shrike was common in the open fields of southern Illinois during all our visits to that part of the state. Several nests were found - usually in the trees of old orchards, in hedge rows between cultivated fields, or in the low brushy shrubbery of the pastures and cultivated fields. The nest illustrated by figure 1, plate XVIII, was found June 15, in an orchard near Benton, Franklin County. And figure 2, plate XVIII, is of a nest and seven eggs found May 17 near Bondville, Champaign County. It was located about ten feet from the ground in the forks of a large hedge tree.



624. *Vireo olivaceus* (Linn.). Red-eyed Vireo.

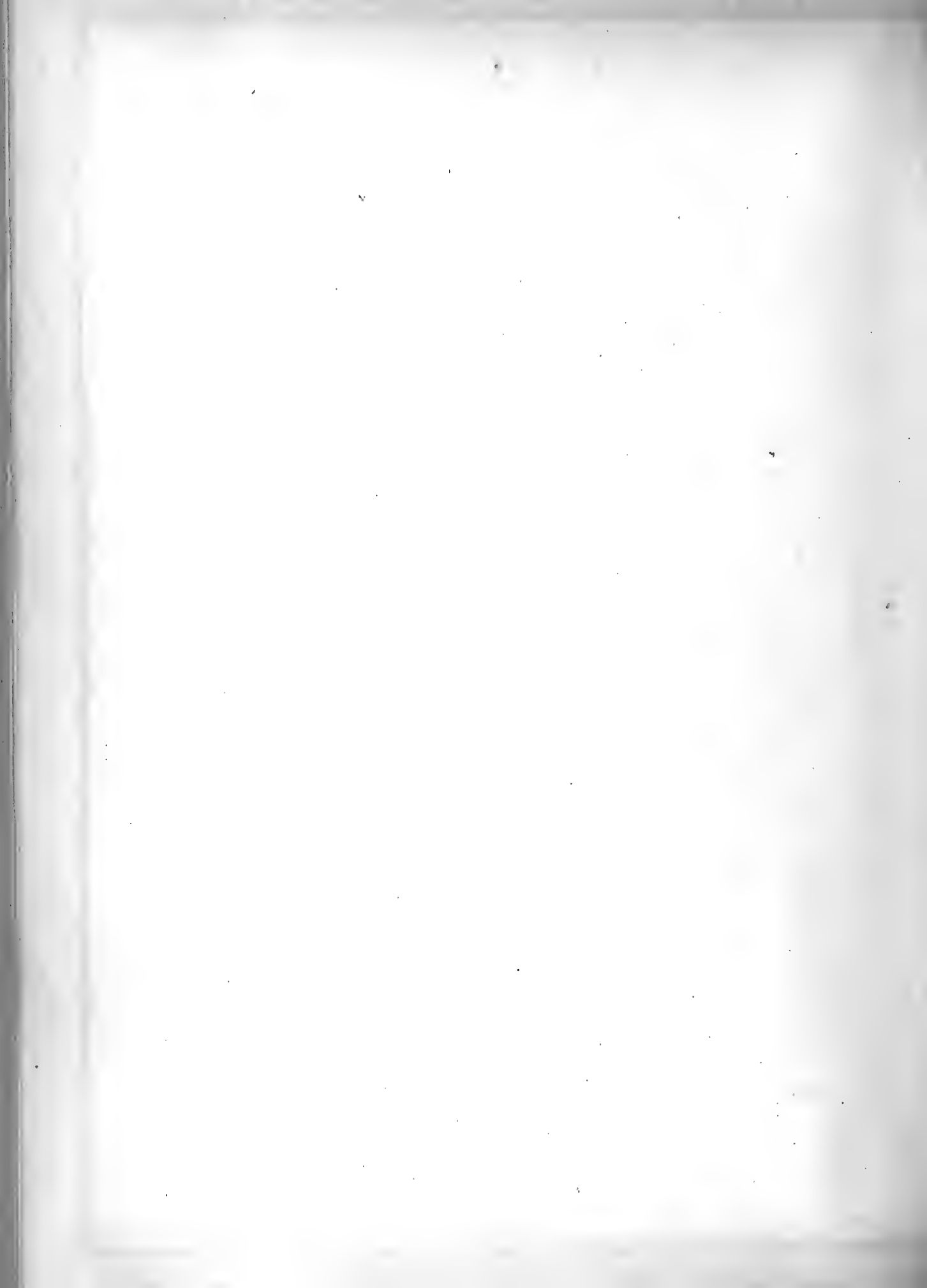
From June 4 to July 1, the red-eyed vireo was a common inhabitant of dense forests where there was considerable second growth timber, and where the light was dimmed by a dense canopy of foliage. Figures 1 and 2, plate XL, and figures 1 and 2, plate XLI, are typical views of forests where the red-eyed vireo was common. During the breeding season, we seldom found those birds in the open woods and clearings, but most of them spent their entire time in the dense forest interiors, where their incessant calling was usually in evidence.

631. *Vireo noveboracensis* (Gmel.). White-eyed Vireo.

A pair of white-eyed vireos was seen June 25 at the margin of a woodland northeast of Metropolis. One of them, when first noticed, was searching the leaves of the shrubbery shown in the foreground of figure 2, plate XXXI, while its mate was flying about the branches of the trees. From her peculiar actions and activity it seemed probable that several hungry mouths were waiting for the green larvae she held in her beak. We saw several of these birds June 26 in the swampy forest between Rosebud and Homberg, in southern Saline County.

638. *Helinaia swainsonii* (Aud) Swainson's Warbler.

On the afternoon of June 17, we had the good fortune to see, and to hear for the first time the rare Swainson's warbler. It was in a narrow but tall and dense growth of willows bordering a low, wet, pasture about four miles north of Duquoin, Perry County. As we entered the thicket, our attention was attracted by the loud whistle of some new bird. Going in its direction, we found a plain-colored warbler perched about twenty feet from the



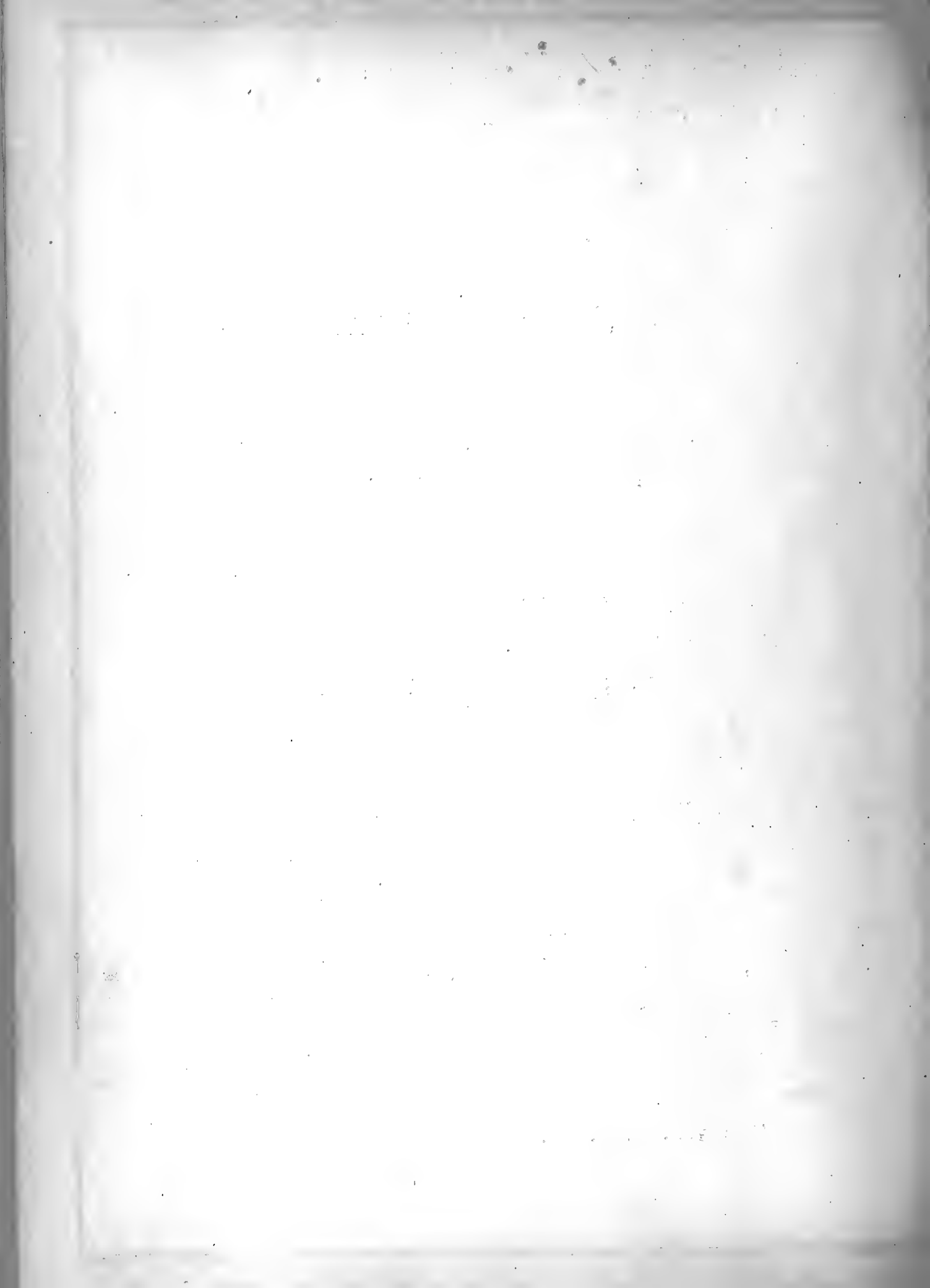
ground among the smaller branches of the willows. It did not notice us at first, but seemed to put all its spirit and energy into its song. This consists, as Brewster¹ describes it, "of a series of clear ringing whistles, the first four uttered rather slowly and in the same key, and the remaining five or six more rapidly, and in an evenly descending scale. In general effect, it recalls the song of the Water Thrush, Seiurus naevius. It is very loud, very rich, very beautiful, while it has an indescribable tender quality that thrills the senses after the sound has ceased."

The olive-brown upper parts, the dull white superciliary line, and the dusky white under parts slightly tinged with yellow, were distinctly recognizable, but the crown was not a bright reddish brown as it is said to be in the breeding, or adult plumage. Unfortunately, we had no gun with us and we were unable to make a subsequent visit to that locality.

There are extensive areas of low, swampy forest along the Little Muddy river which may be attractive resorts for this swamp-loving species, but there are no patches of cane which, according to Brewster, seem to be necessary for this bird. There is however, much water, aquatic vegetation, and dense shrubbery, as is shown by figures 1 and 2, plate XXXI. These photographs were taken in rather open places east of DuQuoin. There we found the yellow breasted chat, cardinal, northern yellow-throat, wood thrush, and green heron to be very common; and a careful study of the place at the proper time would perhaps reveal the presence of Swainson's warbler.

¹

Auk '77, vol. 2, p. 72.



This warbler was discovered in 1833 by Bachman, in the vicinity of Charleston, South Carolina¹. It was not seen again until about 1858 when W. F. Jones secured a specimen in Liberty County, Georgia². Since that time it has been found in various places in the southeastern United States, but it is as yet comparatively rare as far north as southern Illinois. One of these birds was seen by Mr. Ridgway and Dr. Brewster in the cypress swamps near Mount Carmel in 1878³, but when shot by them, unfortunately could not be found. This warbler was seen by O. Widmann in southeastern Missouri in that extension of the state southward along the Mississippi known as the Peninsula of Missouri⁴. Other specimens have been recorded from Fulton County, Kentucky, and from Knox County, Indiana. A male was taken by Mr. Black, April 9, 1905, at Kearney, Nebraska⁵, which Mr. Worthen thinks is perhaps the farthest north and west of any recorded locality.

648b. *Compothlypis americana ramalinae* (Ridgw.). Western Parula Warbler.

A small band of parula warblers was seen June 7 in the forests along the Saline River southwest of Harrisburg. They kept to the tops of the tallest trees, the dense foliage of which made it difficult to follow and identify them. They were very active, and occasionally uttered a peculiar, buzzing, insect-like note, which first attracted my attention to them.

652. *Dendroica aestiva* (Gmel.). Yellow Warbler.

Three yellow warblers were seen in southern Illinois - a pair of them June 28 in a large orchard north of Golconda, Pope

¹ Auk '06, vol. XXIII, p. 227.

² Auk '77, vol. II, p. 66.

³ Bul. Nuttall Ornithological Club '78, vol. 3, p. 163.

⁴ Auk '95, vol. 12, pp. 112-117.

⁵ Auk '06, vol. 23, p. 227.



County, and a male, June 14, in an orchard near Mount Vernon, Jefferson County.

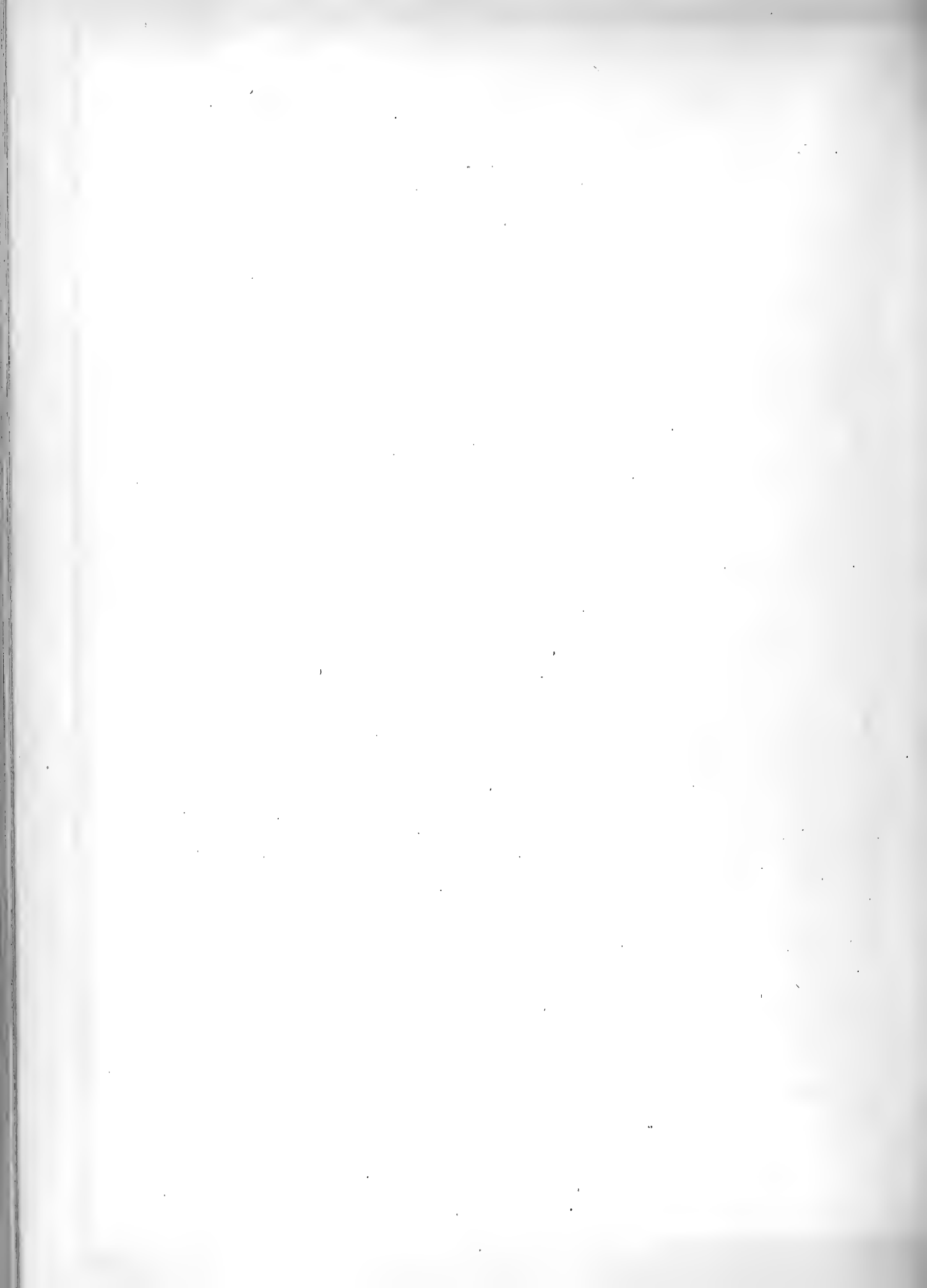
655. *Dendroica coronata* (Linn.). Myrtle Warbler.

Myrtle warblers were very common in woodlands and in fields of tall weeds and shrubbery traversed by us between Cairo and Anna, October 31 to November 5, but none were seen on the continuation of this trip to Ashley, November 5 to 16. December 25, 1907, numbers of them were seen associating with golden-crowned kinglets, and white-throated sparrows, in the scanty growth of pines on the top and among the crevices of Oven Rock - a small, precipitous cliff standing at the edge of the Mississippi River north of Grand Tower, Jackson County. (Figure 1, plate XLIII.). Several more were seen January 2, 1908, among the cypress trees at Horseshoe Lake, Alexander County. (Figure 2, plate XXXVII.) Here in company with a phoebe, they were capturing the small gnats which were plentiful along the margin of the lake.

663a. *Dendroica dominica albilora* (Ridg.). Sycamore Warbler.

A male of the sycamore warbler was taken April 8, south of Lawrenceville, in the bottomlands of Indian Creek. The plumage of this bird, and of others seen here, was so badly smeared with grease that it was difficult to recognize the species. The waste of the oil wells of this region is allowed to flow into the creek, which during the high water, deposits a layer of petroleum on the tree trunks and the lower shrubbery from which the unfortunate birds become miserably bedraggled and besmeared.

The sycamore warbler has been reported a visitant in northern Illinois, nesting as far north as southern Michigan; but the center of density of its distribution in Illinois is the Wabash

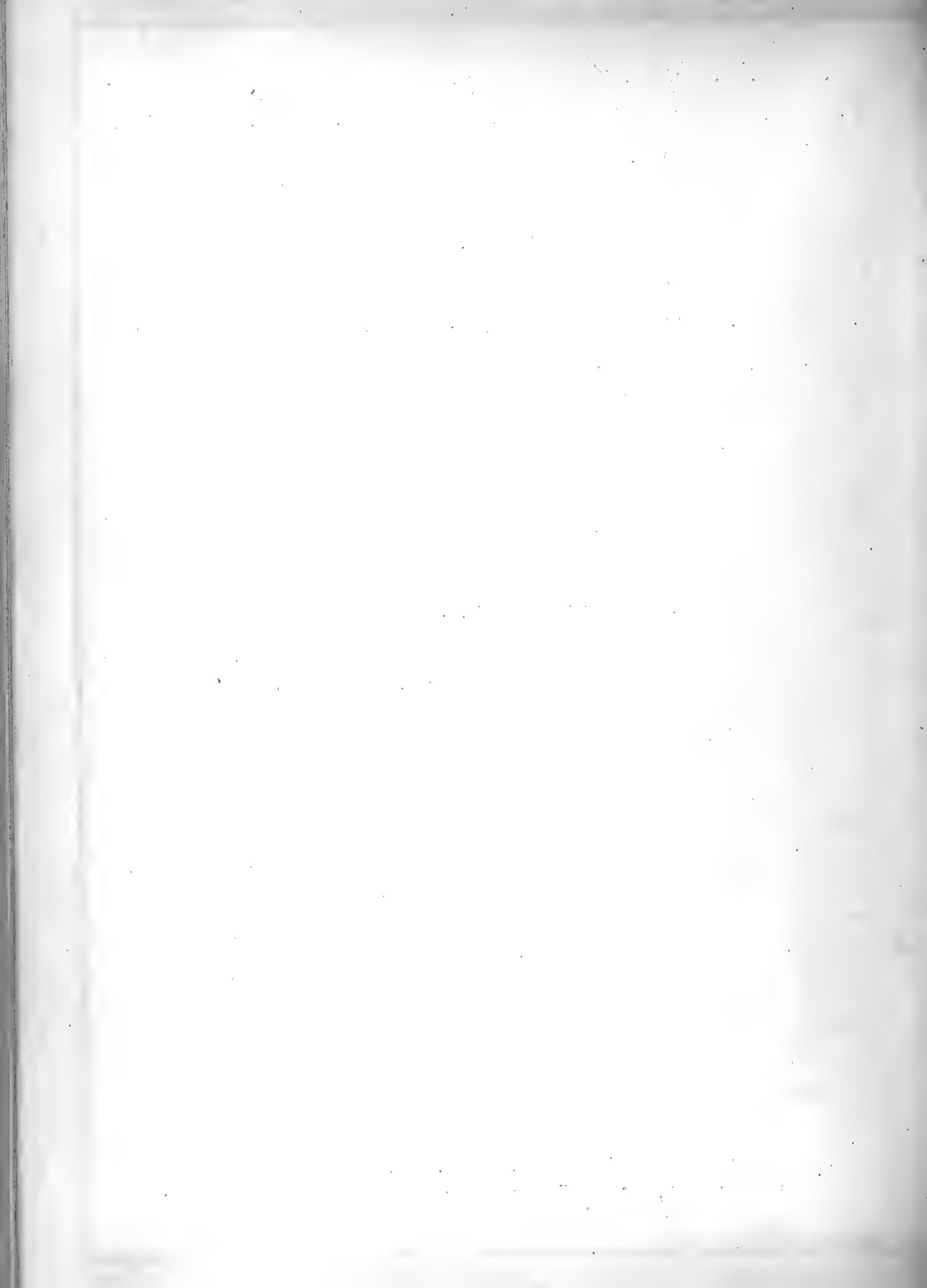


Valley. E. W. Nelson in his notes on the birds of southern Illinois observed between July 17 and September 4, 1875¹, reports this warbler as common. He collected thirty six specimens in the vicinity of Mount Carmel, but did not find it about Cairo or in the Mississippi bottoms west of Anna. Other observers have reported it as common in the Wabash Valley in both Illinois and Indiana. John F. Ferry found none of this species on his collecting trip, August 10 to 24, 1906², in Alexander and Pulaski counties and none were found by us during our operations in the vicinity of Benton, DuQuoin, and the lower Ohio Valley, although we kept a sharp lookout for it in every favorable locality. The bottomlands of the streams and rivers of southern Illinois, especially in the Wabash Valley, support a luxuriant growth of deciduous trees attractive to many of the forest species. The sycamore tree reaches here its greatest size and highest degree of perfection. The correlation between the distribution of this tree and that of the sycamore warbler has often been mentioned and the greater abundance of the latter in the Wabash Valley may be partly due to this preference. It not only frequents these trees, but often nests in the uppermost branches of a giant sycamore. A. W. Butler³ in Birds of Indiana, mentions a pair of these birds whose nest was on a very small branch of a sycamore sixty to seventy five feet above ground and twenty feet from the trunk. The trunk of this tree was seven feet in diameter, and the lowest limb was forty feet from the ground, - an example of the inaccessible situation of some of these nests. Figure 2, plate XXXIII, is a photograph of a scene

¹ Bul. Essex Institute '77, vol. 9, p. 35.

² Auk '07, vol. 25, pp. 430-435.

³ Birds of Indiana '98, p. 1065.



on Indian Creek which illustrates the character of the timber and vegetation along some of the smaller streams. In such places one can reasonably expect to find the sycamore warbler during the proper season of the year. These woodlands, however, occupying as they do, the fertile land along the streams, are rapidly disappearing with the advance of agriculture, and as these forests diminish such species as the sycamore warbler will undoubtedly become less common and gradually disappear.

675a. *Seiurus noveboracensis notabilis* (Ridg.). Grinnel's
Water-Thrush

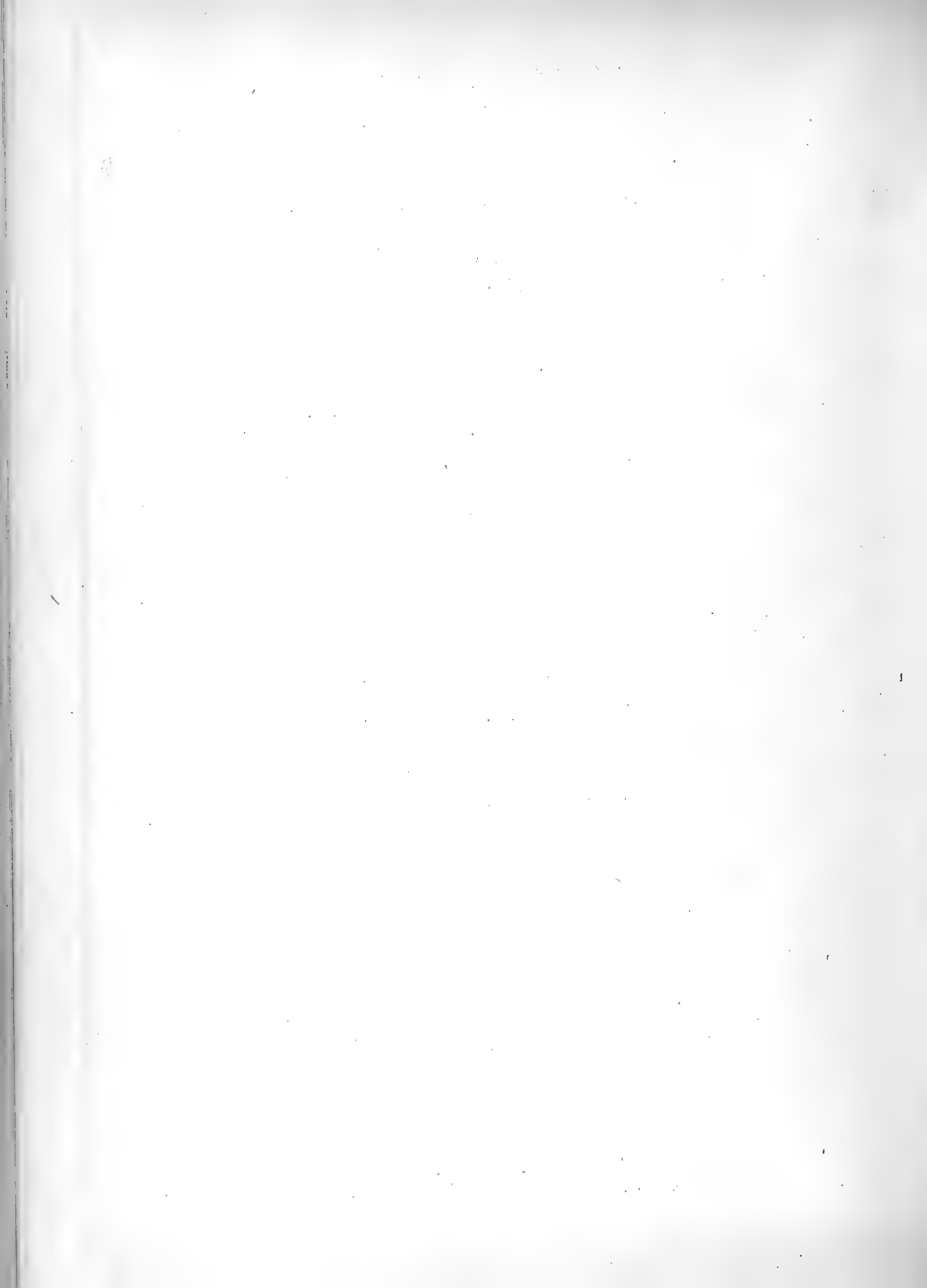
A Grinnel's water-thrush was obtained, January 2, in the cypress swamp at Horse-shoe Lake, Alexander County. When first seen it was actively moving and bobbing in the usual manner about the fallen tree trunks seen in the foreground of figure 1, plate XXXVIII. This specimen was identified by H. C. Oberhalser of the U. S. Biological Survey, Washington, D. C.

677. *Geothlypis formosa* (Wils.). Kentucky Warbler.

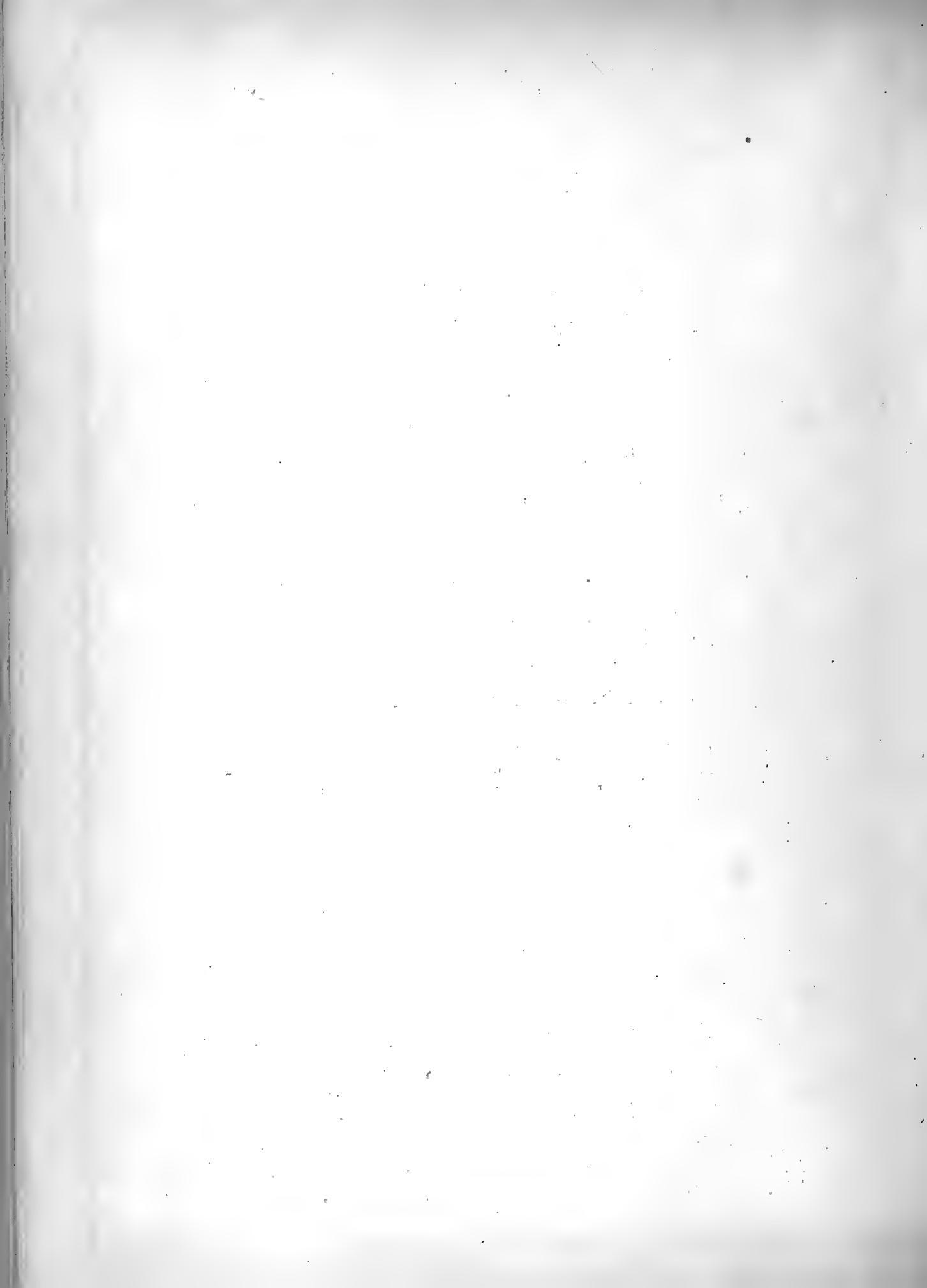
The Kentucky warbler was reported common at Cairo and at Mount Carmel by E. W. Nelson, during his trip to southern Illinois, made from July 17 to September 4, 1875¹; and Robert Ridgway found it the most abundant of the smaller birds about Mount Carmel² during the '70's. It is apparently decreasing in numbers for we saw it but twice during the entire time of our studies in southern Illinois. Although the nature of our work did not allow an extended examination of its probable haunts, we traversed many places where, if abundant, it would surely have come to our

¹ Bul. Essex Institute '77, vol. 9, pp. 35 and 52.

² Bul. Nuttalls Ornithological Club, '78, vol. 3, p. 164.



notice. The first time we met with it was on June 13, 1907, when an adult was seen in the bottomlands of Atchison's Creek, near Bonnie, Jefferson County. The lowlands of this creek are covered with a very thick growth of tall shrubbery, much of which was standing in water at the time of our visit. In some places the foliage of the upper branches was so thick that the spaces beneath were only dimly lighted. When first seen the bird was investigating the drift and debris about the base of a cluster of shrubs. As soon as it caught sight of us it became much excited and flew from place to place, vigorously scolding us at every move. It gave every indication, by its actions, that it had a nest nearby, but a careful search of the vicinity failed to reveal one. In such a place, however, a nest can easily be overlooked, and, although no other individuals were seen, it is probable that the mate was there, but was not flushed by us. The only other birds in this thicket were northern yellow-throats whose "Wichity! Whichity! Wichity!" sounded with amazing loudness through the dim recesses of this quiet retreat. Five Kentucky warblers were seen, June 28, north of Golconda, Pope County, on a wooded plateau beside the Ohio. The larger trees of this timber, as in most forests of southern Illinois, have been used for making railroad ties, the tops and trimmings being left on the ground; and these, with the sprouts and second growth timber that spring up in the open places, make an attractive resort for many such birds as the Kentucky warbler. Two of those seen here were adults, but the other three were immature and all were apparently members of one household. The plumage of the young was well developed but differed considerably from that of the adults. Their lores were grayish, the sides of the head and



the upper parts of the body a light brown, the throat and the chin a light yellowish brown, and the crissum and the belly a light yellow. These birds, although active, were easy to observe, often permitting us to approach within a few yards of them.

681d. *Geothlypis trichas brachidactyla* (Swains). Northern Yellow-throat.

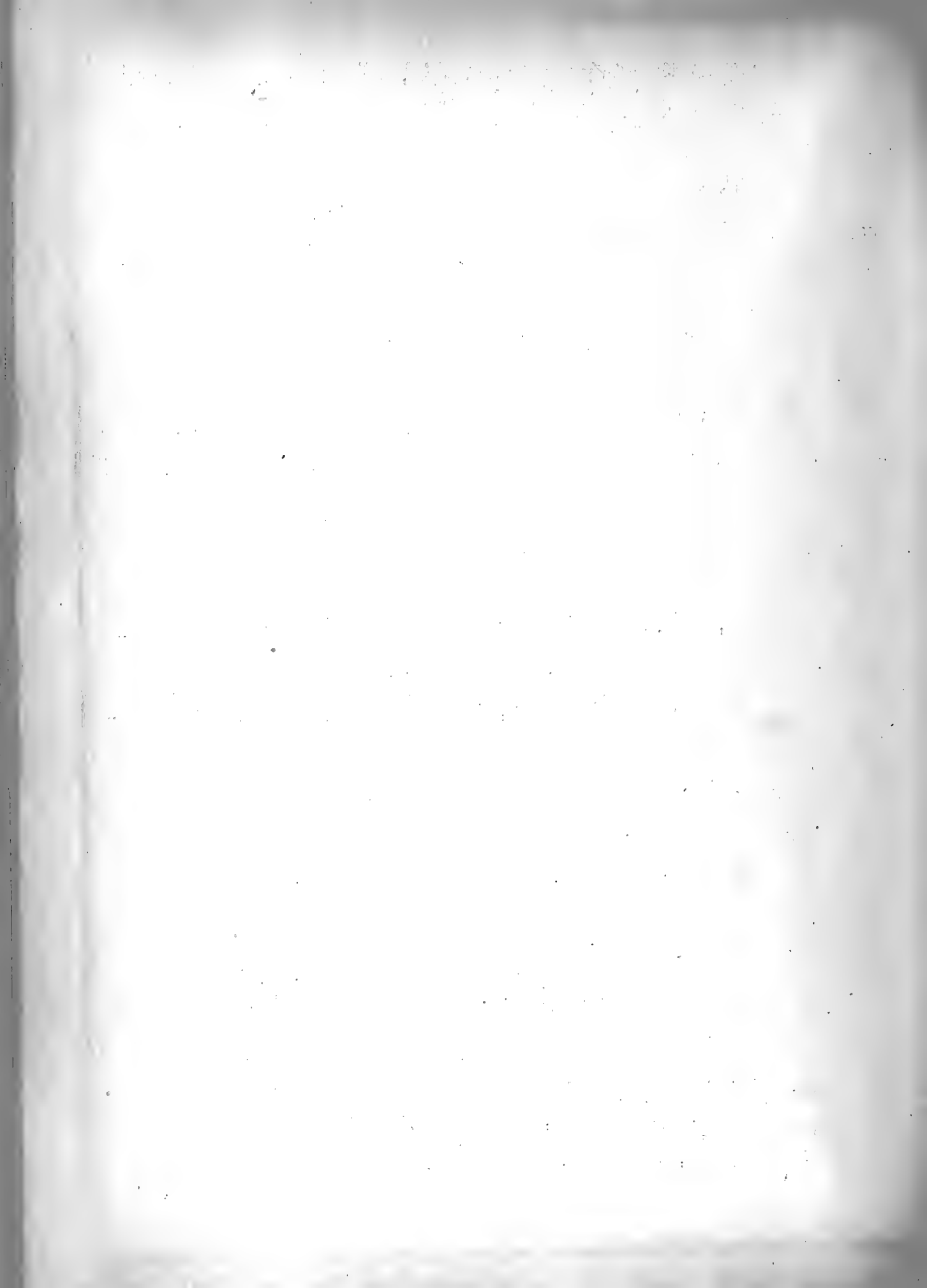
The northern yellow-throat was common in the low, swampy forests where there was considerable shrubbery and a semi-aquatic vegetation as shown in figure 1, plate XXXI. In certain localities, especially in the vicinity of Benton and Duquoin, it was very abundant in the marshy growth along the small brooks, and in the tall grass and weeds at the margins of cultivated fields.

683. *Icteria virens* (Linn.). Yellow-breasted Chat.

The yellow-breasted chat was very common, and was frequently heard, but, because of its skulking habits, it was seldom seen. When it did appear, in the open, however, it did not seem to be alarmed at our presence, but continued its clownish evolutions as it chattered and screamed a most varied combination of calls and notes. It was most frequently heard among the dense undergrowth of the forests, and in cleared places grown up to briar patches and shrubbery. It was especially abundant, June 28 to 30, in the numerous wooded ravines along the Ohio River between Golconda and Elizabethtown.

697. *Anthus pensilvanicus* (Lath.). American Pipit.

In southern Illinois the American pipit was present only during our fall and spring visits to that section of the state. Forty two were seen, October 31, in a stubble field about a mile south of Villa Ridge, where they were extremely tame and easily



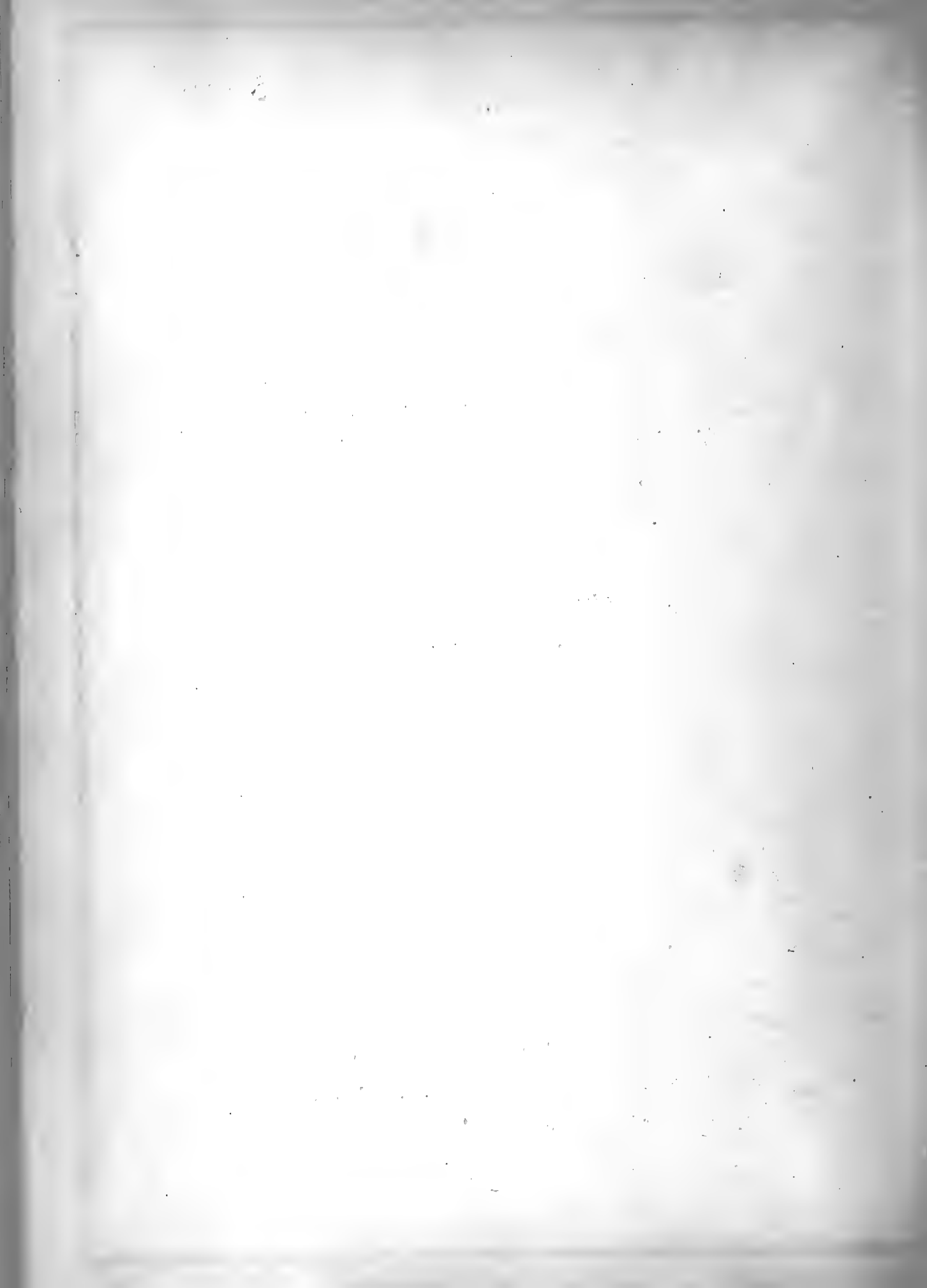
observed as they ran over the weathered stubble to an adjoining plowed portion of the field. They gave little heed to a farmer plowing nearby but some ran past within a few yards and others followed the plow picking up small particles of food. Twenty six of them were flushed November 13 from a weedy pasture just without the village of Patoka. When disturbed the flock repeatedly rose from the tall frost-covered weeds, alighting but a few yards in advance of us. When closely pressed, the whole flock left the field, but soon circled and returned. A flock of fifty eight was seen April 4, feeding in a field of freshly plowed ground about a mile south of Marshall, Clark County. The pipits, although seldom seen were always in flocks of considerable size.

703. *Mimus polyglottos* (Linn.). Mockingbird.

The mockingbird is comparatively common throughout the year in southern Illinois. From February 6 to 21, it was oftenest seen in the forests, in protected ravines, and in places where there was an abundance of mistletoe, the berries of which probably formed a considerable part of its food at that time of the year. A specimen was taken, February 8, east of Pulaski, the crop and stomach of which were filled with that food. I saw several of them at Grand Tower, December 26, feeding on the berries of the mistletoe which is very abundant in the Mississippi bottoms at that place. (Figure 1, plate XXXVI.) In summer the mockingbird is most abundant in the brier patches and shrubbery of the open fields and pastures,- situations which it usually selects for nesting.

704. *Galeoscoptes carolinensis* (Linn.). Catbird.

The catbird was not common in southern Illinois, June 4 to July 1, but was met with occasionally in the thickets of



shrubbery, hedge rows, and in old orchards. Figures 1 and 2, plate XIX, are photographs of nests which were built in the trees of an apple orchard near Benton, Illinois.

705. *Toxostoma rufus* (Linn.). Brown Thrasher.

The brown thrasher was very common, and widely distributed in all favorable places visited by us June 4 to July 1. Like the wrens it sometimes selects peculiar places for its nests, several of which were found in brush heaps and one in Franklin County was in a rail pile at the edge of an open pasture, far from trees and shrubbery. Like the catbird, however, it often resorts to the orchards and brier patches for its nesting place. The nest illustrated by figure 1, plate XX, was in the uppermost branches of an apple tree near Benton, twenty feet from the ground - another rather unusual position for the thrasher to select. A specimen was obtained January 1, 1908, in the cypress swamp at Horse-shoe Lake, Alexander County. This was the only one we saw during the winter, and this bird is probably rare in Illinois at that season. Because of its beauty and its attractive song, the brown thrasher is encouraged and protected by all who appreciate the aesthetic charm as well as the practical value of our birds.

718. *Thryothorus ludovicianus* (Linn.). Carolina Wren.

No lover of birds can visit the woodlands of southern Illinois without being attracted by the clear, loud notes of the Carolina wren. My first acquaintance with this species was made during the latter part of October, 1906. When this active, excitable bird was found in the lowland timber southwest of Cairo, it bustled nervously about among the old logs and underbrush, giving utterance to the characteristic combination of notes which Chapman

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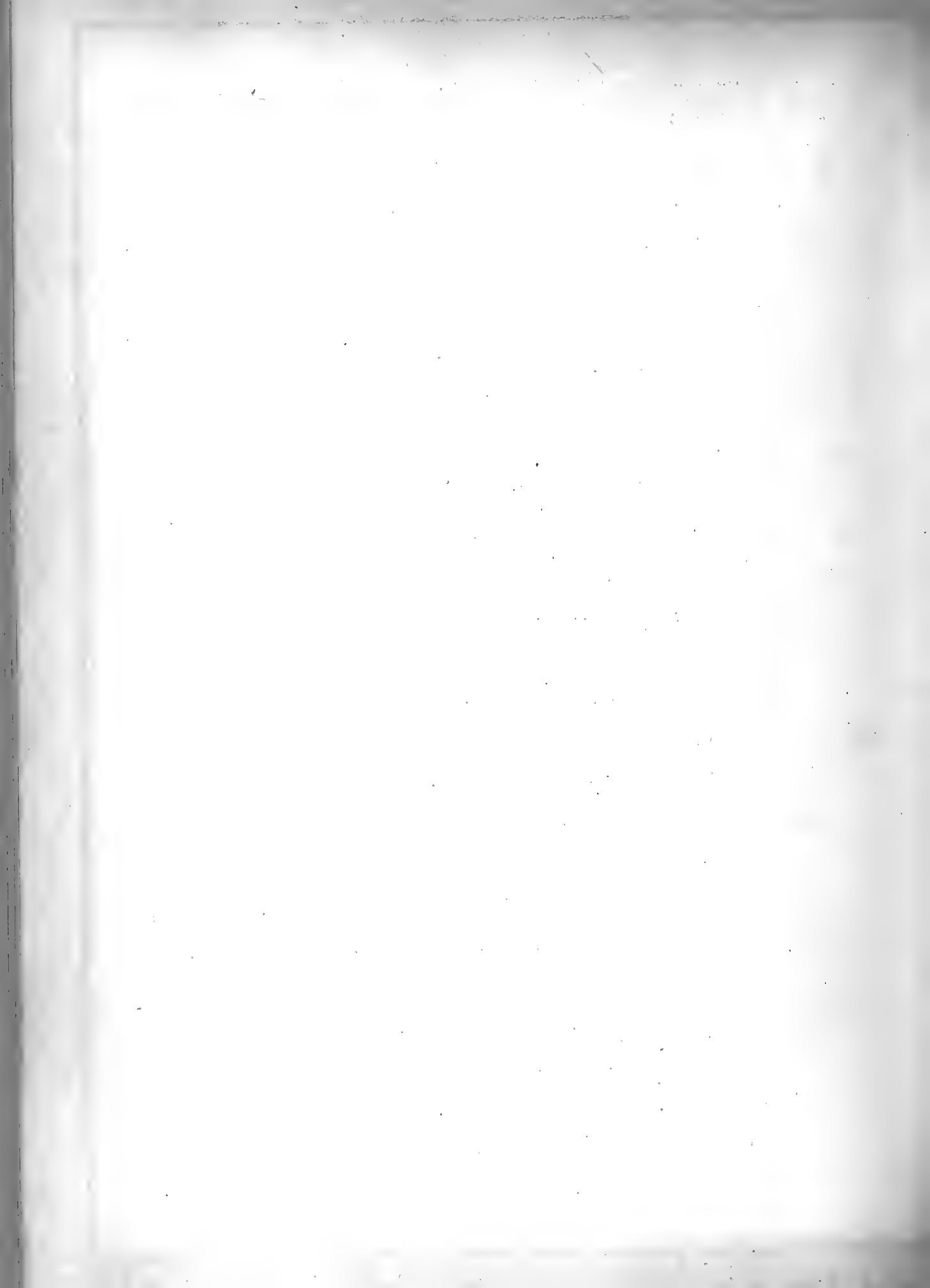
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describes as scolding cacks, clinking, metallic rattles, musical trills, and tree-toadlike kr-z-r-rings. The vigorous scolding note was oftenest used, especially when the inquisitive intruders ventured too near. It was a common resident of the denser woods south of the thirty ninth parallel, and in winter it was especially abundant in the cypress swamps and thick woods at Ullin, Reevesville, and Olive Branch. (Figures 2 and 3, plate XLVIII, and figure 2, plate XXXIX.) Here it was much in evidence and its notes resounded through the atmosphere of those quiet places. In the summer and fall it was found in more open areas, such as old, deserted orchards, along fences between cultivated fields grown up to shrubbery, in sassafras thickets, and even in yards about the houses. While staying at the small village of Shetlerville, in the hills along the Ohio River, June 28, I was awakened in the night by the notes of several birds coming from a wooded ravine below. Going out into the open air, I heard the notes of the carolina wren together with the song of the mockingbird and the freak calls of the yellow-breasted chat. The night was so clear that the members of this band of moonlight seranaders could be easily identified.

A nest of this species was found at Golconda, June 27, in an old woodshed near a cottage in the residence part of town. It had been built on a shelf in a dark corner among fruit jars, old newspapers, and other debris. (Figure 2, plate VII.) There was no cover to the structure, and it was not hidden by any object as is usual with the nests of this species. It contained four nearly full grown fledglings which, however, are not clearly distinguishable in the above photograph.



719. *Thryomanes bewickii* (Aud.). Bewick's Wren.

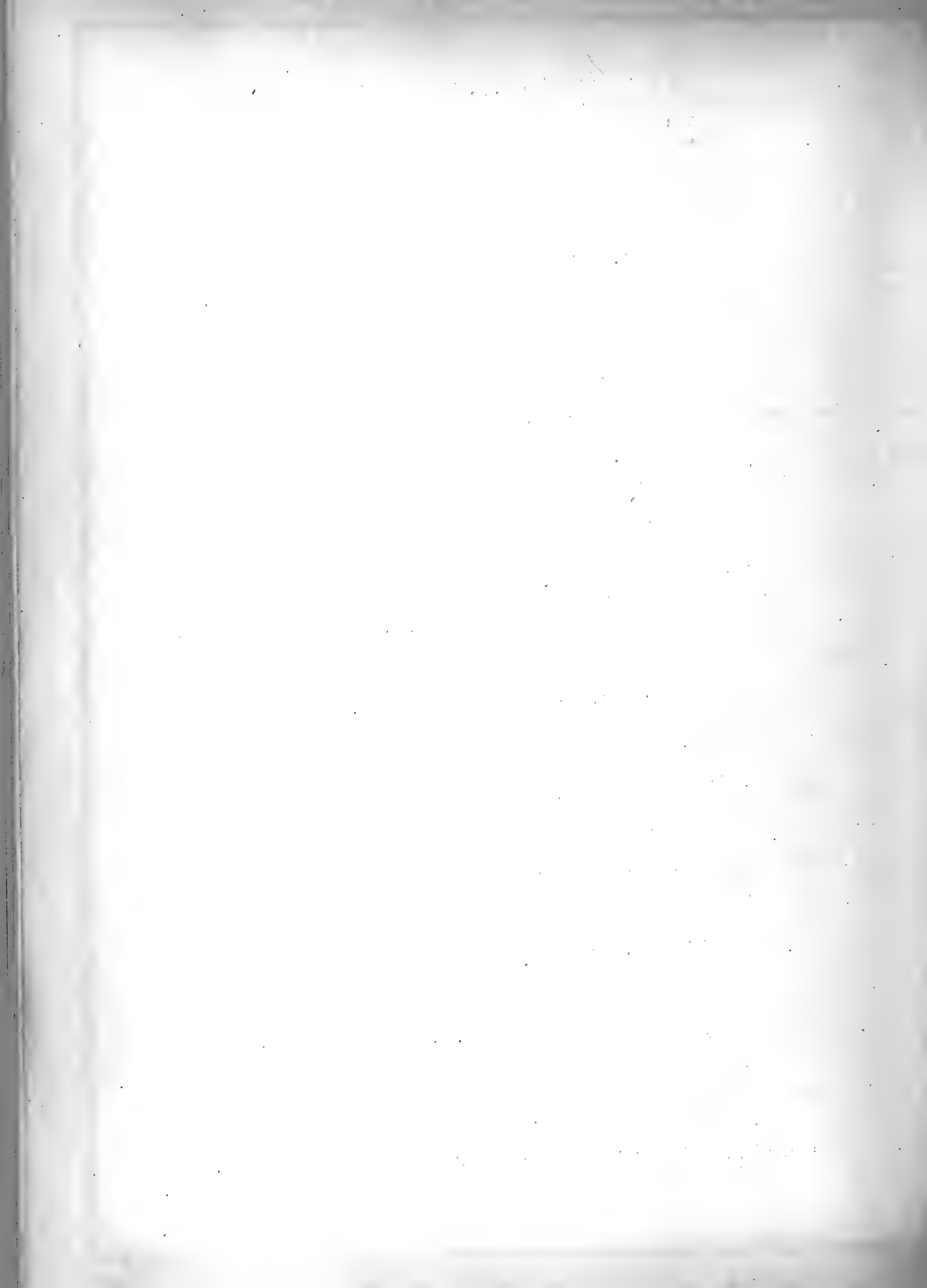
Bewick's wren takes the place of the common house wren in southern Illinois. It was commonly seen about the old outbuildings of the farms, and when not molested often ventured to build in the nooks and corners of dwellings. At a farm house in central Massac County, north of Metropolis, a pair of these wrens had made their nest in a bucket which hung over the door of the kitchen porch, a place where members of the family were frequently passing at every hour of the day. Not uncommonly this wren was found away from dwellings, along old fences grown up to shrubbery, and in places frequented by the Carolina wren. It has been reported a permanent resident in southern Illinois, but none were seen by us on our winter visits.

721a. *Troglodytes aedon parkmanii* (Aud.). Parkman's Wren,
Western House Wren.

A Parkman's wren was shot and three others were noticed in southern Illinois. One was seen June 5 near Thompsonville, Franklin County, in the orchard illustrated by figure 2, plate XXVIII, and two were found nesting June 18 in an orchard north of Tamaroa, Perry County. Ridgway, in his *Birds of North and Middle America*, gives its range in the Mississippi Valley as northward from Richland County, Illinois, but both of these localities are farther south.

722. *Olbiorchilus hiemalis* (Vieill.). Winter Wren.

We usually found the winter wren in wet, tangled lowland timber and in cypress swamps. It was common there, October 30, and one was shot in the dense low timber southwest of Cairo. Here these nervous little creatures were fidgeting about and actively



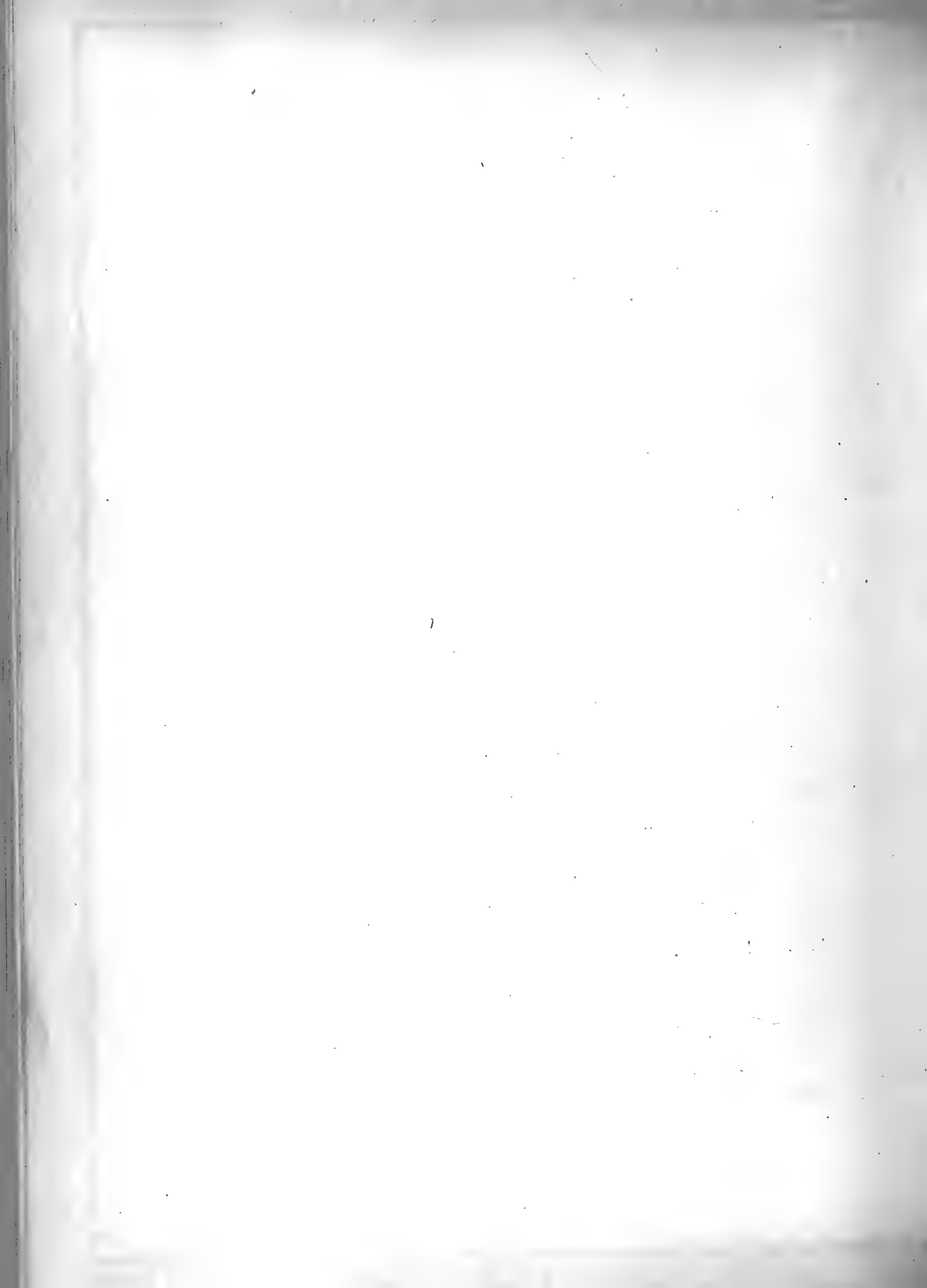
exploring every old log, brush heap, and thicket that came in their way. Several were seen and many were heard, November 2, in the cypress swamp near Ullin, Pulaski County. One was seen near Carmi April 11, 1907, - the only one recorded during the Harvey-Brownsville trip, March 26 to April 11, a time when they are usually common in central Illinois. I secured a specimen, and saw two others December 24, 1907, among the brush heaps of a clearing near Running Lake, Union County, and the species was very common, December 31 to January 3, in the cypress swamps about Horse-shoe Lake, Alexander County. (Figure 2, plate XXXIX.)

726. *Certhia familiaris americana* (Bonap.). Brown Creeper.

The brown creeper is a winter resident in southern Illinois, but it was not often seen during our trip from Thebes to Eldorado, February 6 to 21. It was common, however, in the upland timber in the vicinity of Grand Tower, Jackson County, December 23 to 28; and among the wooded hills north of Olive Branch, December 31, 1907 to January 3, 1908.

727. *Sitta carolinensis* (Lath.). White-breasted Nuthatch.

The white-breasted nuthatch is a common permanent resident in southern Illinois, but it was more abundant during February 6 to 21, than during June 4 to July 1. During the winter its "yank! yank! yank!" was often heard in the larger forests where it continually busied itself in scanning the tree trunks for food. At Olive Branch, and in northern Alexander County, its favorite resort was the beech-wood forests which are numerous in that part of the state. Figures 1 and 2 are photographs taken at Olive Branch to show the condition of these woods and size and perfection of some of the trees in that vicinity.



731. *Baeolophus bicolor* (Linn.). Tufted Titmouse.

The tufted titmouse is one of the most characteristic birds of southern Illinois. During our winter visit, February 6 to 21, it was common in all the extensive forests and was exceedingly abundant in the beech woods of northern Alexander County (Figures 1 and 2, plate XXXIV.), and in various places visited along the Ohio River. The white-oak timber, illustrated by figure 4, plate XLV, was virtually alive with a large number of the hearty little creatures flying back and forth and keeping up an incessant Peto, Peto, Peto. The numbers of this bird fall off greatly during the summer, and not more than a dozen were seen from June 4 to July 1.

736. *Parus carolinensis* (Aud.). Carolina Chickadee.

The Carolina is the prevalent chickadee in southern Illinois. All seen were carefully identified and many specimens were shot, especially during the winter, February 6 to 21, but the northern form, the black-capped chickadee, was not found. The Carolina chickadee is a common permanent resident, and, as far as our records go, there was little difference in abundance at the various seasons of our visits to southern Illinois.

748. *Regulus satrapa* (Licht.). Golden-crowned Kinglet.

The golden-crowned kinglet was common on our trip from Cairo to Pana, October 31 to November 16, and between Harvey and Brownsville, March 26th April 11. We saw a flock of seven among the shrubbery of a clearing near Running Lake, Union County, and five others January 1, 1908, in the cypress swamp at Horse-shoe Lake, Alexander County.



749. *Regulus calendula*. (Linn.). Ruby-crowned Kinglet.

The ruby-crowned kinglet is common during the migrations, but no visits were made to southern Illinois during the height of its movement. Two were seen, April 4, in a woodland near Marshall - all that were recorded by us in that section of the state.

755. *Hylocichla mustelina* (Gmel.). Wood Thrush.

The wood thrush is a common summer resident in southern Illinois. We seldom found it in high or open groves and clearings, from June 4 to 26, but it frequented instead the low, wet woodlands along the streams and in the valleys. (Figures 1 and 2, plate XL, and figure 2, plate XLI.) Its song is its chief attraction, and nothing is more pleasing than its mellow, flute-like notes as they echo through the shady avenues and recesses of its secluded haunts. Several nests were found in the dense undergrowth of the swampy forest between Benton and DuQuoin, and in the thick woods along the Saline River, southeast of Harrisburg.

759b. *Hylocichla guttata pallasii* (Cab.). Hermit Thrush.

The hermit thrush was common in the woodlands between Marshall and Brownsville, April 4 to 11. None were noticed during our winter observations between Thebes and Eldorado, February 6 to 21, but one lone representative was seen, January 1, 1908, in the cypress swamp at Horse-shoe Lake. The winter of 1907 to 1908 was unusually mild, and it is probable that the hermit thrush is not a regular, or at least not a common, winter resident in Illinois.

761. *Merula migratoria* (Linn.). American Robin.

The robin is a permanent resident of southern Illinois. It was exceedingly abundant in large flocks sometimes of several hundred in the woods and cypress swamps along the Cache River, at



the time of our trip from Cairo to Anna, October 31 to November 5. It was also common in the cornfields and grazed pastures - where it found a considerable portion of its food. February 6 to 21 its numbers were reduced to the very few that wintered in the protected forests, or in the wooded ravines among the hills. I saw none in Jackson and Union counties, December 23 to 29, 1907, and only one at Olive Branch, December 31, 1907 to January 3, 1908. During the summer it was most abundant in orchards and pastures, but was widely distributed over various kinds of open fields.

766. *Sialia sialis* (Linn.). Bluebird.

The bluebird was present in considerable numbers during all our visits to southern Illinois. It is apparently more abundant in winter than in summer, for many more were seen February 6 to 21, than June 4 to July 1. In the winter it was often seen in the forests, but in summer it showed no decided preference in respect to situation, but built its nests wherever a suitable place could be found. Several were placed in hollow fence posts and in stumps in clearings and open cultivated fields, at some distance from any trees or shrubbery.



EXPLANATION OF PLATES

Plate I, Figures 1 and 2. Quail's nest and sixteen eggs. Tall weeds and grass at the margin of a cornfield near Benton, Franklin County, June 22, 1907.

Plate II, Figures 1 and 2. Quail's nest and six eggs. Timothy field south of Bois, Washington County, June 18, 1907.

Plate III, Figures 1 and 2. Prairie hen's nest and nine eggs. Timothy field east of Clinton, DeWitt County, May 16, 1907.

Plate IV, Figure 1. Mourning dove's nest and two eggs. Timothy between the rows of the orchard, illustrated by figure 1, plate XXVIII. Near Mount Vernon, Jefferson County, June 14, 1907.

Figure 2. Mourning dove's nest and two eggs. Pasture southeast of Thompsonville, Franklin County, June 5, 1907.

Plate V, Figure 1. Mourning dove's nest and two young. Apple tree, shown in the foreground of figure 1, plate XXVIII. East of Mount Vernon, Jefferson County, June 14, 1907.

Figure 2. Mourning dove's nest and two eggs. Cornfield near Beason, Logan County, July 16, 1907.

Plate VI, Figures 1 and 2. Prairie horned lark's nest and four eggs. Oatfield east of Ogden, Champaign County, May 28, 1907.

Plate VII, Figure 1. Red-winged blackbird's nest and three eggs. Timothy field near Benton, Franklin County, June 4, 1907.

Figure 2. Carolina wren's nest and four young. Interior of an outdoor building at Golconda, Pope County, June 27, 1907.

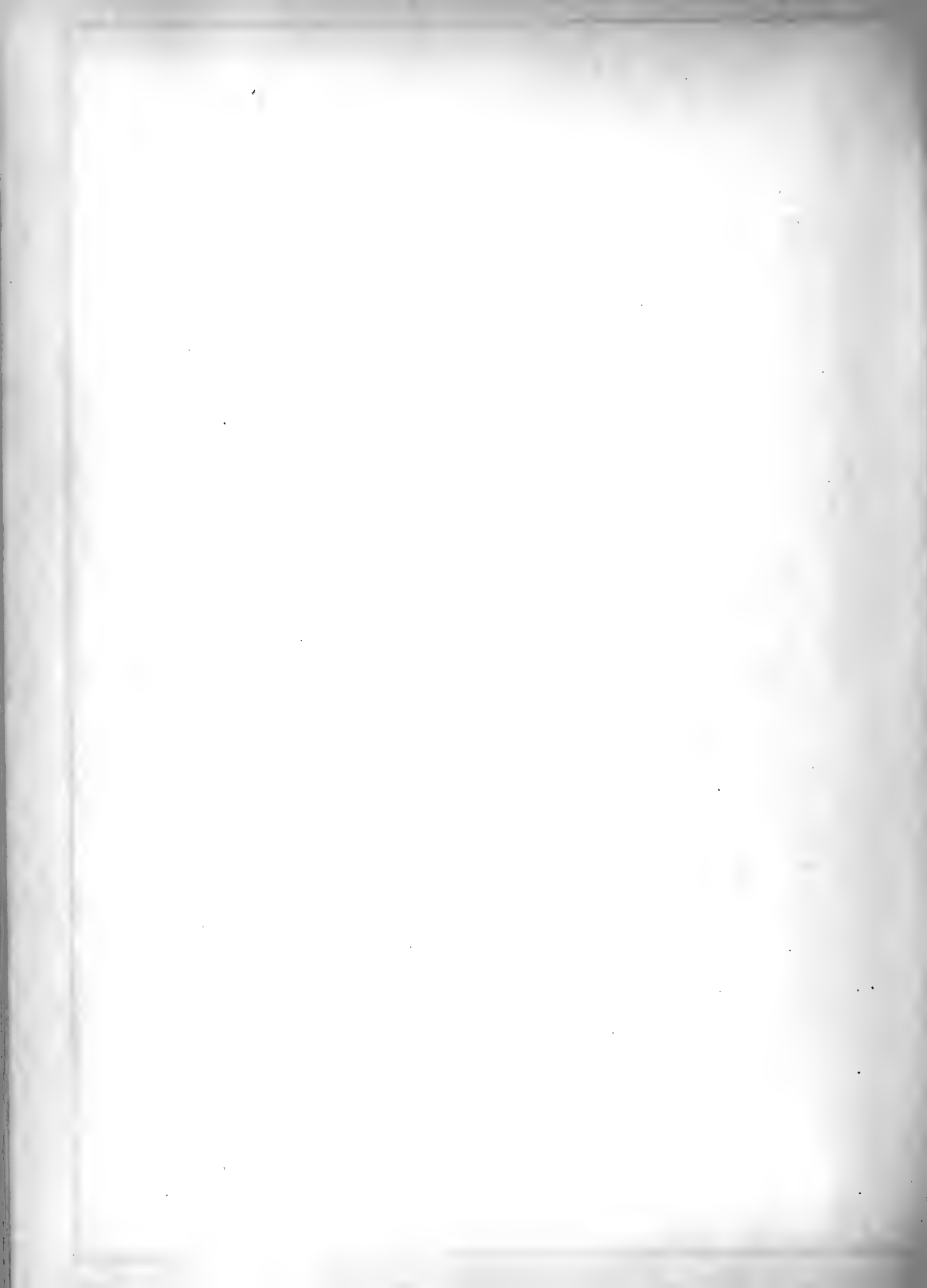


Plate VIII, Figure 1. Meadowlark's nest and five eggs. Timothy field near Elkville, Jackson County. June 21, 1907.

Figure 2. Meadowlark's nest and four eggs. Pasture illustrated by figure 1, plate XXIII, south of Marion, Williamson County, June 11, 1907.

Plate IX, Figure 1. Meadowlark's nest and five eggs. Open woodland near Urbana, Champaign County, May 30, 1907.

Figure 2. Meadowlark's nest and five eggs. Timothy field near Clinton, DeWitt County, May 16, 1907.

Plate X, Figures 1 and 2. Vesper sparrow's nest and three eggs. Hayfield near Belvidere, Boone County, July 31, 1907.

Plate XI, Figures 1 and 2. Vesper sparrow's nest and three eggs. Cornfield southwest of Clinton, DeWitt County, July 22, 1907.

Plate XII, Figure 1. Grasshopper sparrow's nest and four eggs. Alfalfa field near Urbana, Champaign County, May 22, 1907.

Figure 2. Chipping sparrow's nest and three eggs. Evergreen tree on the University campus at Urbana, Champaign County, May 24, 1907.

Plate XIII, Figure 1. Lark sparrow's nest and four eggs. Oat field near Oakwood, Vermilion County, May 28, 1907.

Figure 2. Lark sparrow's nest and four eggs. Oat field near Johnston City, Williamson County, June 10, 1907.

Plate XIV, Figure 1. Field sparrow's nest, two eggs and three young. Weedy cloverfield near Golconda, Pope County, June 28, 1907.

Figure 2. Field sparrow's nest and four eggs. Briar thicket of a pasture near Christopher, Franklin County, June 20, 1907.

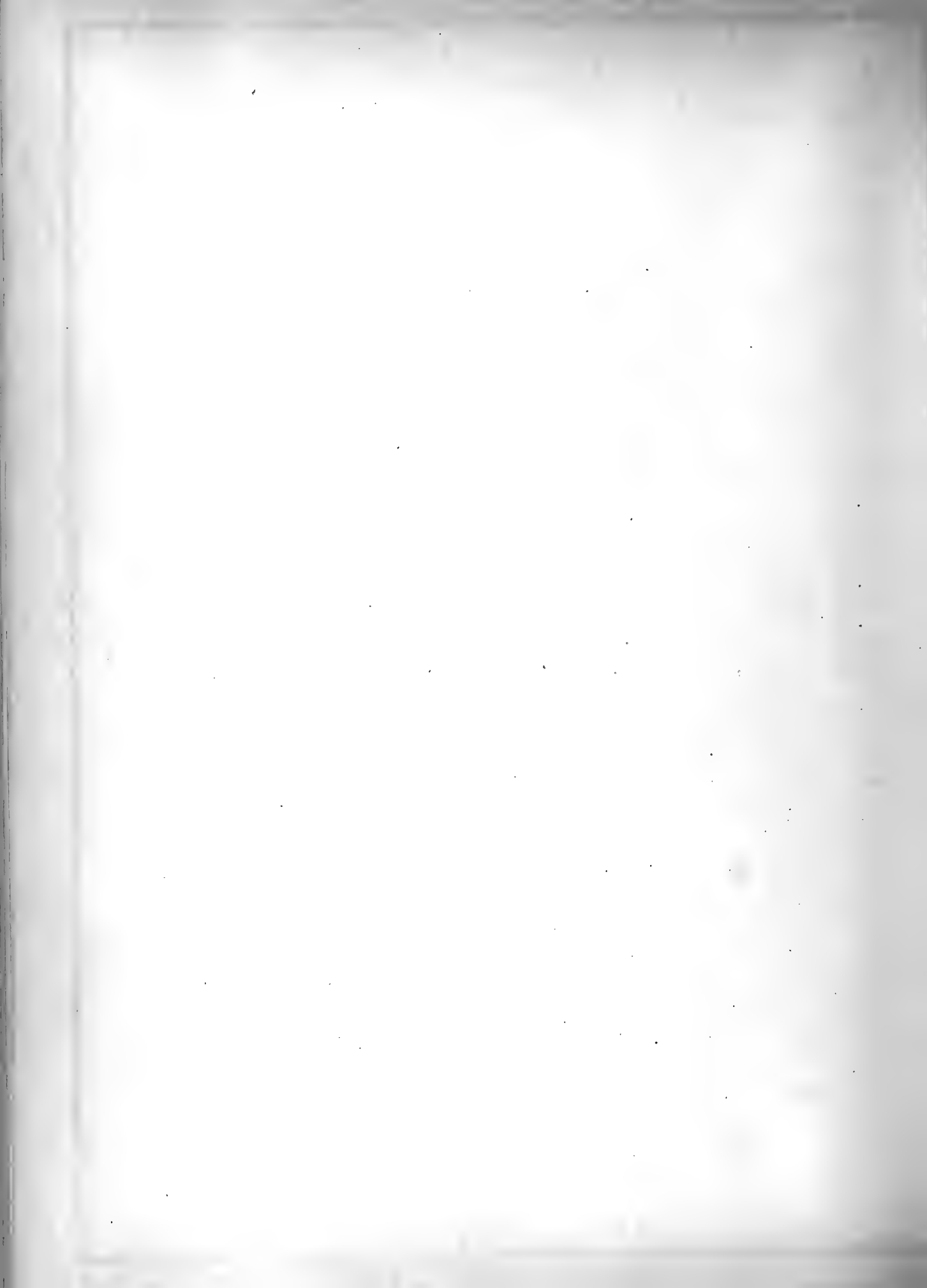


Plate XV, Figure 1. Field sparrow's nest and three young with necks outstretched and beaks distended. Pasture illustrated by figure 2, plate XXIX. Near Smothersville, Franklin County, June 4, 1907.

Figure 2. Dickcissel's nest and four eggs. Rose bush of an open field near Shetlerville, Hardin County, June 28, 1907.

Plate XVI, Figure 1. Dickcessel's nest and five eggs. Timothy field near Galatia, Saline County, June 6, 1907.

Figure 2. Dickcessel's nest and four eggs. Timothy field west of Smothersville, Franklin County, June 4, 1907.

Plate XVII, Figures 1 and 2. Cardinal Grosbeak's nest and four eggs. Orchard at Benton, Franklin County, June 15, 1907.

Plate XVIII, Figure 1. Migrant shrike's nest and five eggs. Orchard at Benton, Franklin County, June 15, 1907.

Figure 2. Migrant shrike's nest and seven eggs. Osage orange tree along roadside near Bondville, Champaign County, May 17, 1907.

Plate XIX, Figure 1. Catbird's nest and three young. Orchard near Benton, Franklin County, June 16, 1907.

Figure 2. Catbird's nest and two eggs. Orchard at Benton, Franklin County, June 15, 1907.

Plate XX, Figure 1. Brown thrasher's nest and four eggs. Orchard at Benton, Franklin County, June 15, 1907.

Figure 2. Robin's nest and three eggs. Orchard at Benton, Franklin County, June 15, 1907.

Plate XXI, Figure 1. Nests of the cliff swallow. Eave of a barn near Barclay, Sangamon County, July 24, 1907.

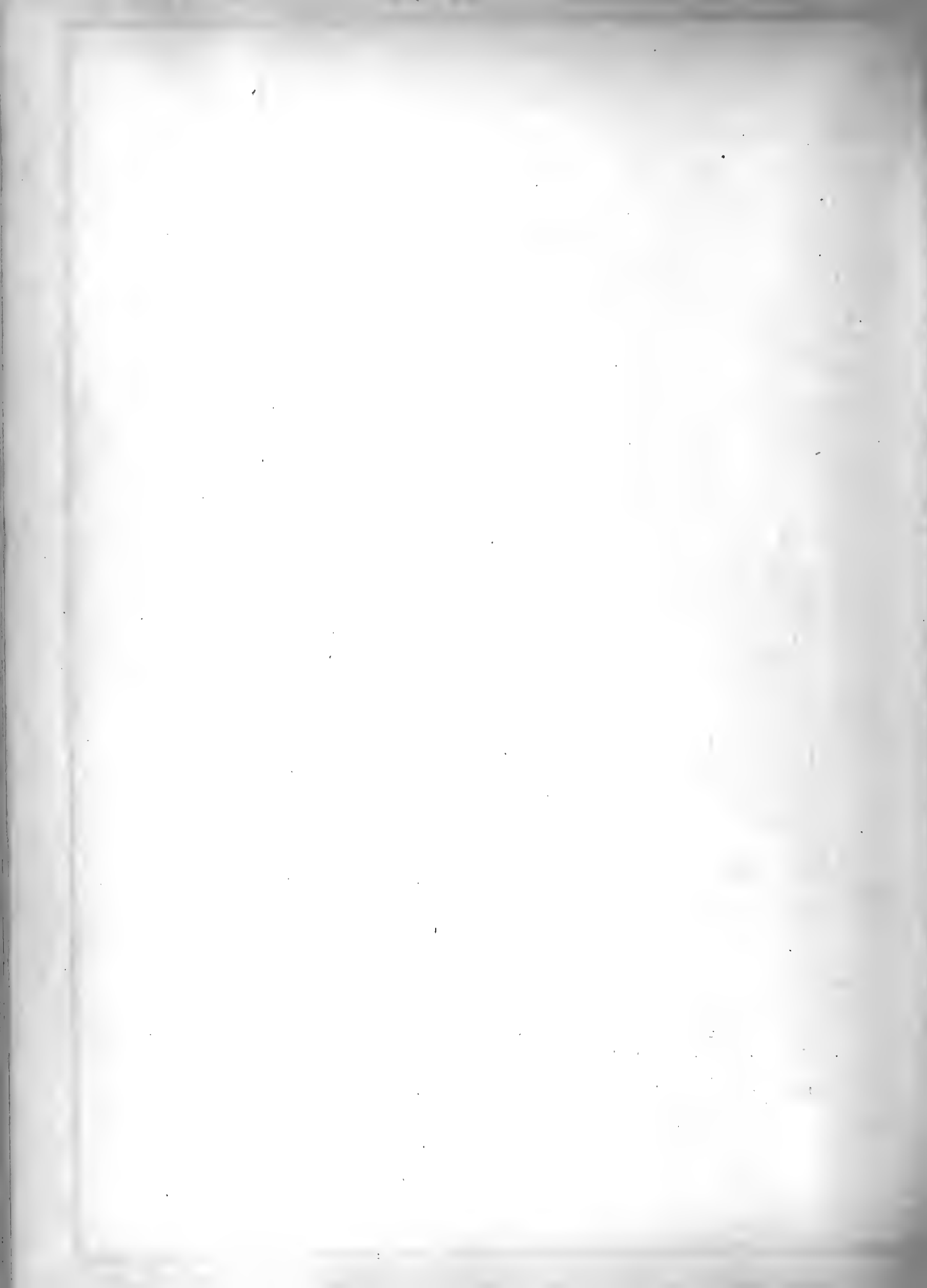


Figure 2. Peculiar nesting site of the great crested flycatcher. Parent bird perched at end of cannon. Fort Massac Park, Metropolis, Massac County, June 25, 1907.

Plate XXII, Figure 1. Pasture and feeding ground. Near Carmi, White County, April 11, 1907.

Figure 2. Stubble near Robinson, Crawford County, April 5, 1907.

Plate XXIII, Figure 1. Pasture and orchard south of Marion, Williamson County, June 11, 1907.

Figure 2. Timothy field near Smothersville, Franklin County, June 4, 1907.

Plate XXIV, Figure 1. Fallow ground (deserted cornfield), near Tamaroa, Perry County, June 19, 1907.

Figure 2. Cornfield near Clinton, DeWitt County, July 22, 1907.

Plate XXV, Figure 1. Wheat field, near New Frankford, Franklin County, June 10, 1907.

Figure 2. Hedge fence near Tamaroa, Perry County, June 10, 1907.

Plate XXVI, Figure 1. Landscape five miles northeast of Metropolis, Massac County, June 25, 1907.

Figure 2. Pasture and shrubbery near Bluford, Jefferson County, June 14, 1907.

Plate XXVII, Figure 1. Landscape along the Ohio River three miles west of Cave-in-Rock, Hardin County, July 1, 1907.

Figure 2. Landscape four miles west of Shetler-ville, Hardin County, June 28, 1907.

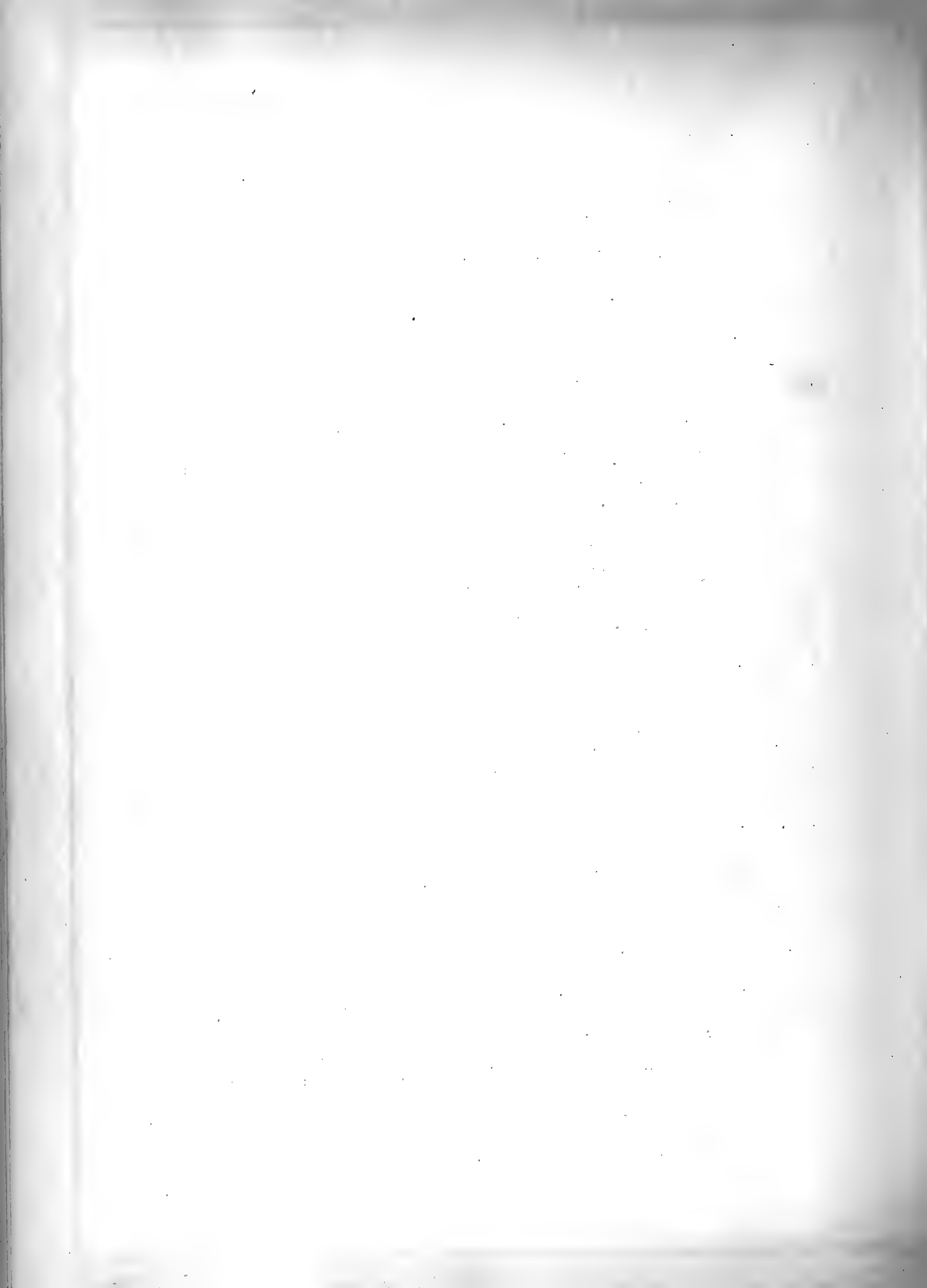


Plate XXVIII, Figure 1. Orchard near Mount Vernon, Jefferson County, June 14, 1907.

Figure 2. Old orchard near Thompsonville, Franklin County, June 5, 1907.

Plate XXIX, Figure 1. Pasture grown up to sassafras, near Golconda, Pope County, June 28, 1907.

Figure 2. Pasture near Smothersville, Franklin County, June 4, 1907.

Plate XXX, Figure 1. Clearing grown up to sprouts, near Benton, Franklin County, June 10, 1907.

Figure 2. Woodland, near Metropolis, Massac County, June 25, 1907.

Plate XXXI, Figure 1. Swampy timber, near DuQuoin, Perry County, June 20, 1907.

Figure 2. Swamp, near Bonnie, Jefferson County, June 13, 1907.

Plate XXXII, Figure 1. Bottomland of the Ohio River, above Metropolis, Massac County, June 25, 1907.

Figure 2. Small marsh, within the city limits of Marion, Williamson County, June 11, 1907.

Plate XXXIII, Figure 1. "Spring in the woods," near Mount Carmel, Wabash County, April 9, 1907.

Figure 2. Indian Creek, near Lawrenceville, Lawrence County, April 8, 1907.

XXXIV, Figure 1. Beech timber, near Olive Branch, Alexander County, December 31, 1907.

Figure 2. Giant beech tree, at Horse-shoe Lake, Alexander County, January 2, 1908.

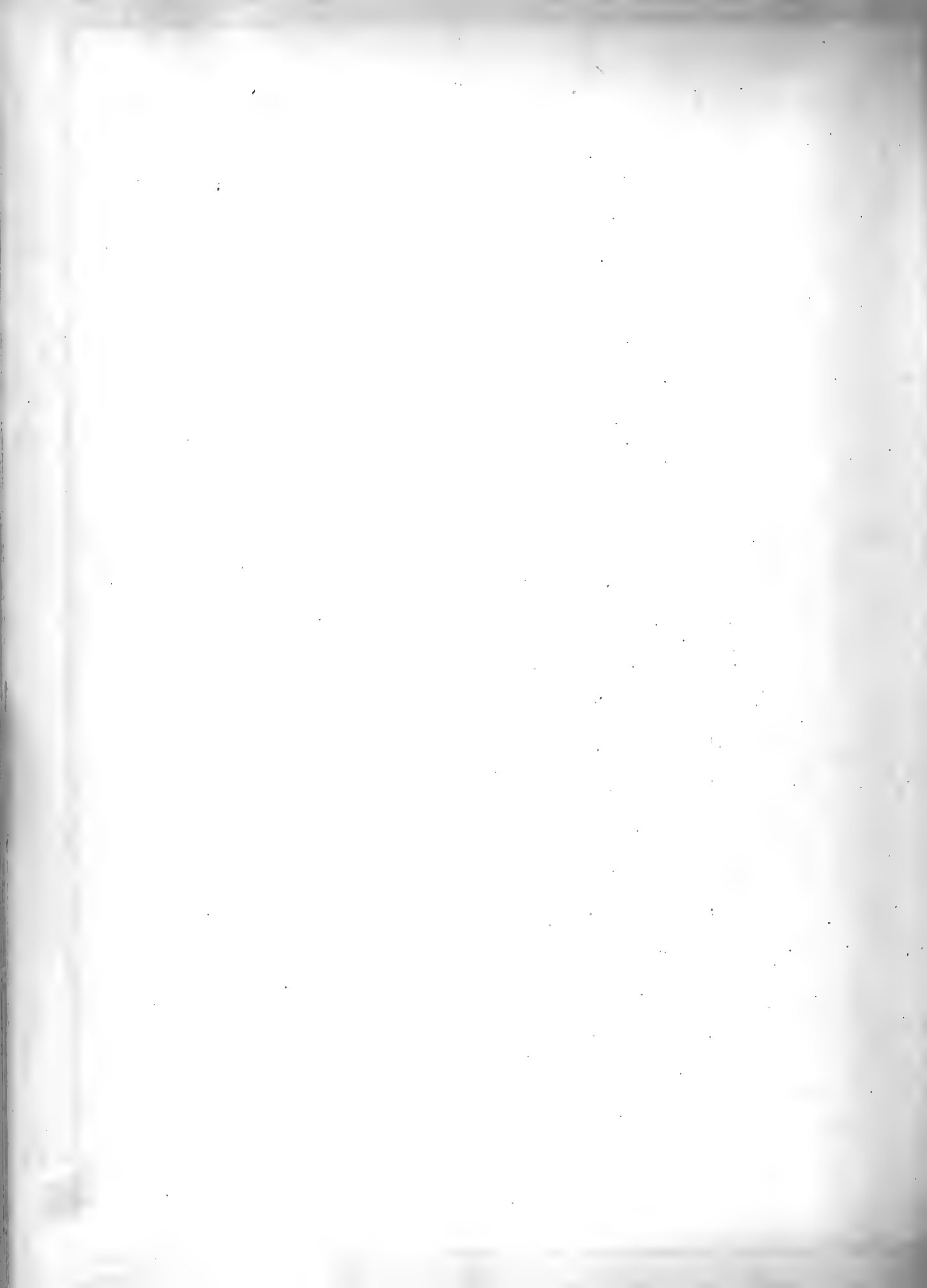


Plate XXXV, Figure 1. Highland timber, near Christopher, Franklin County, June 20, 1907.

Figure 2. Woodland, near Marion, Williamson County, June 11, 1907.

Plate XXXVI, Figure 1. Tree containing numerous branches of mistletoe, near Grand Tower, Jackson County, December 28, 1907.

Figure 2. Dense timber and bluffs, at Running Lake, Union County, December 27, 1907.

Plate XXXVII, Figure 1. Horse-shoe Lake, near Olive Branch, Alexander County, January 1, 1908.

Figure 2. Cypress and knees at Horse-shoe Lake, Alexander County, January 1, 1908.

Plate XXXVIII, Figure 1. Cypress swamp, at Horse-shoe Lake, Alexander County, January 1, 1908.

Figure 2. Forest, at the margin of Running Lake, Union County, December 27, 1907.

Plate XXXIX, Figures 1 and 2: Views of cypress swamp, at Horse-shoe Lake, Union County, January 2, 1907.

Plate XL, Figures 1 and 2. Interior of low, wet woods containing a dense second growth of timber. Figure 1, near Rosebud, Pope County, June 26; Figure 2, near Mulkeytown, Franklin County, June 20, 1907.

Plate XLI, Figure 1. Dense timber and shrubbery, near Rosebud, Pope County, June 26, 1907.

Figure 2. Dense forest, along the Ohio River near Cave-in-Rock, Hardin County, July 1, 1907.

Plate XLII, Figure 1. Back-bone Ridge. At Grand Tower, Jackson County, December 25, 1907.

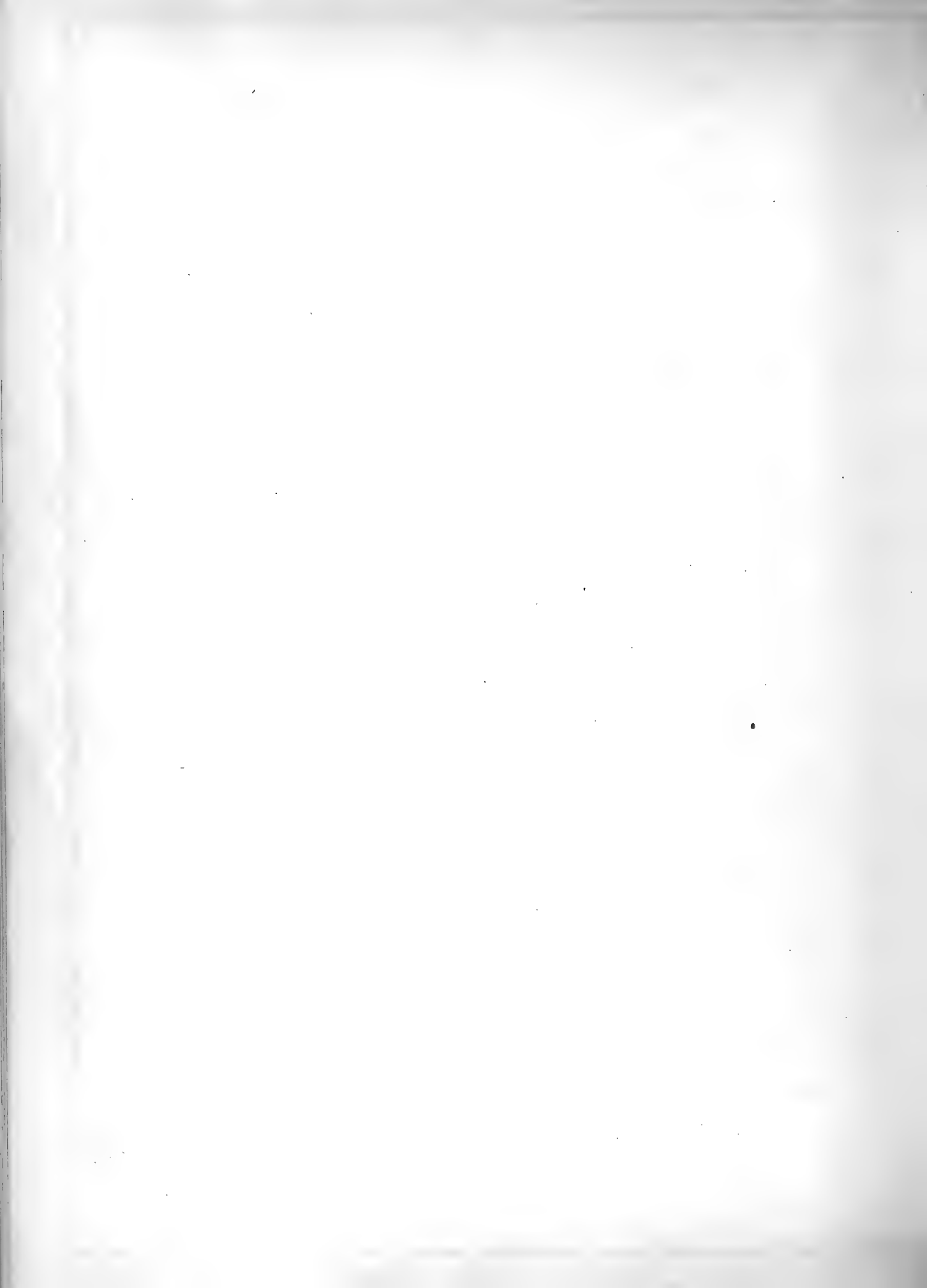


Figure 2. Cliff with Big Bay Creek valley in the background, near Brownfield, Pope County, June 27, 1907.

Plate XLIII, Figure 1. Oven Rock, near Grand Tower, Jackson County, December 25, 1907.

Figure 2. Cliff and shrubbery along the Ohio River, at Cave-in-Rock, Hardin County, July 1, 1907.

Plate XLIV, Figure 1. Roadway leading through the dense timber over the hills seen in the background of figure 2.

Figure 2. Wooded hills near Shetlerville, Hardin County, June 29, 1907.

Plate XLV, Figure 1. Oak tree with clusters of mistletoe, near Eldorado, Saline County, February 21, 1907.

Figure 2. A brook in the forest near Rosebud, Pope County, June 26, 1907.

Figure 3. Cypress swamp, near Reevesville, Johnson County, February 13, 1907.

Figure 4. White-oak timber near Brookport, Massac County, February 11, 1907.

Plate XLVI, Figure 1. Timber on Williams Mountain, near Hartsville, Pope County, February 19, 1907.

Figure 2. Womball's mountain, near Somerset, Saline County, February 19, 1907.

Figures 3 and 4. Partially deforested timber lands, along the Ohio River between Metropolis and Brookport, Massac County, February 11, 1907.

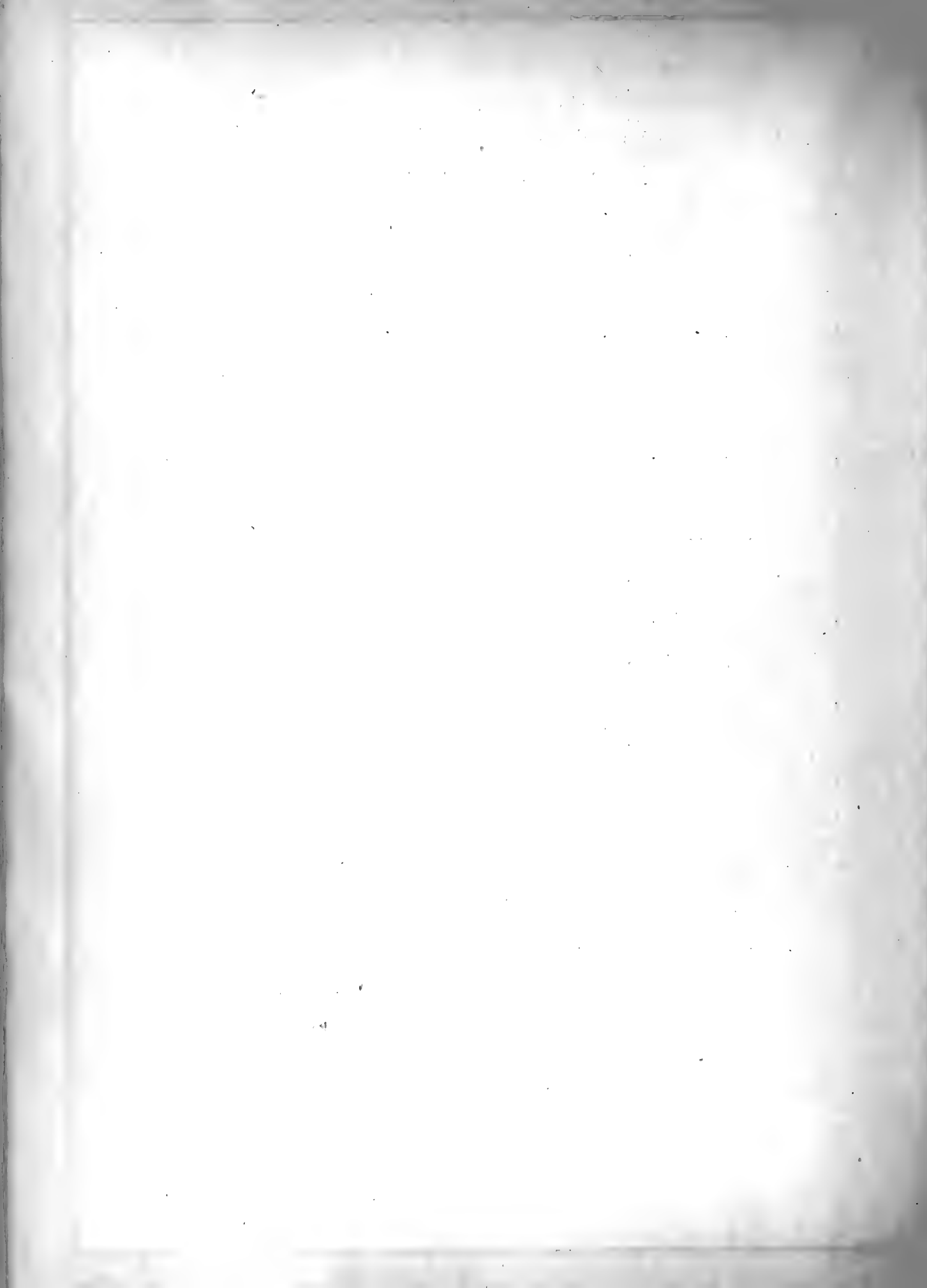
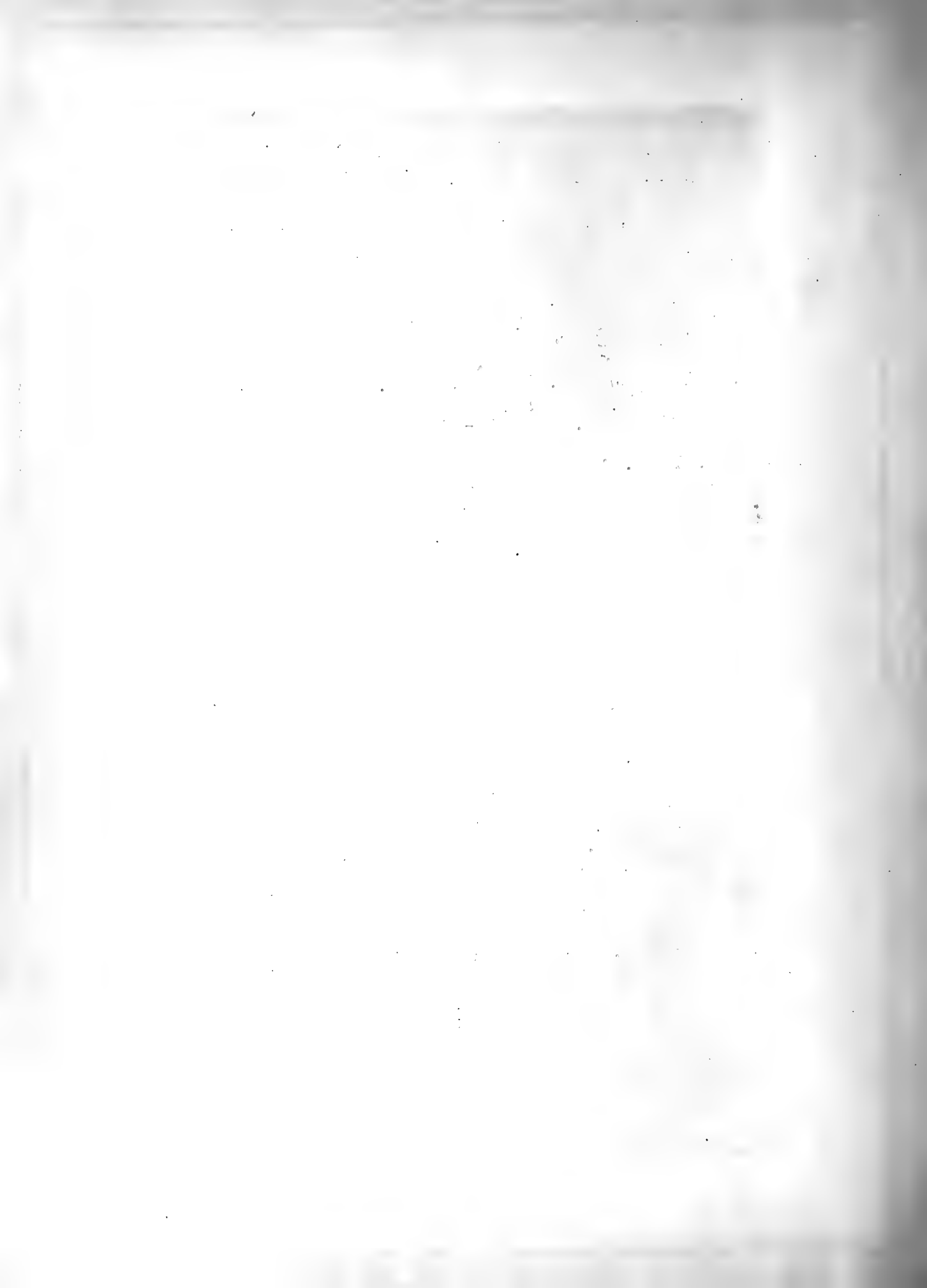


Plate XLVII, Figures 1 to 4. Dense forests, Eagle mountain of southeastern Saline County, February 19, 1907.

Plate XLVIII, Figures 1 to 4. Cypress swamp, between Round Knob, Massac County, and Reevesville, Johnson County, February 13, 1907.

Plate XLIX, Figure 1. Shrubbery and second growth timber A clearing in the dense forest along the Saline River southeast of Harrisburg, Saline County, June 7, 1907.

Figure 2. Tropic-like vegetation along the saline River, June 7, 1907.

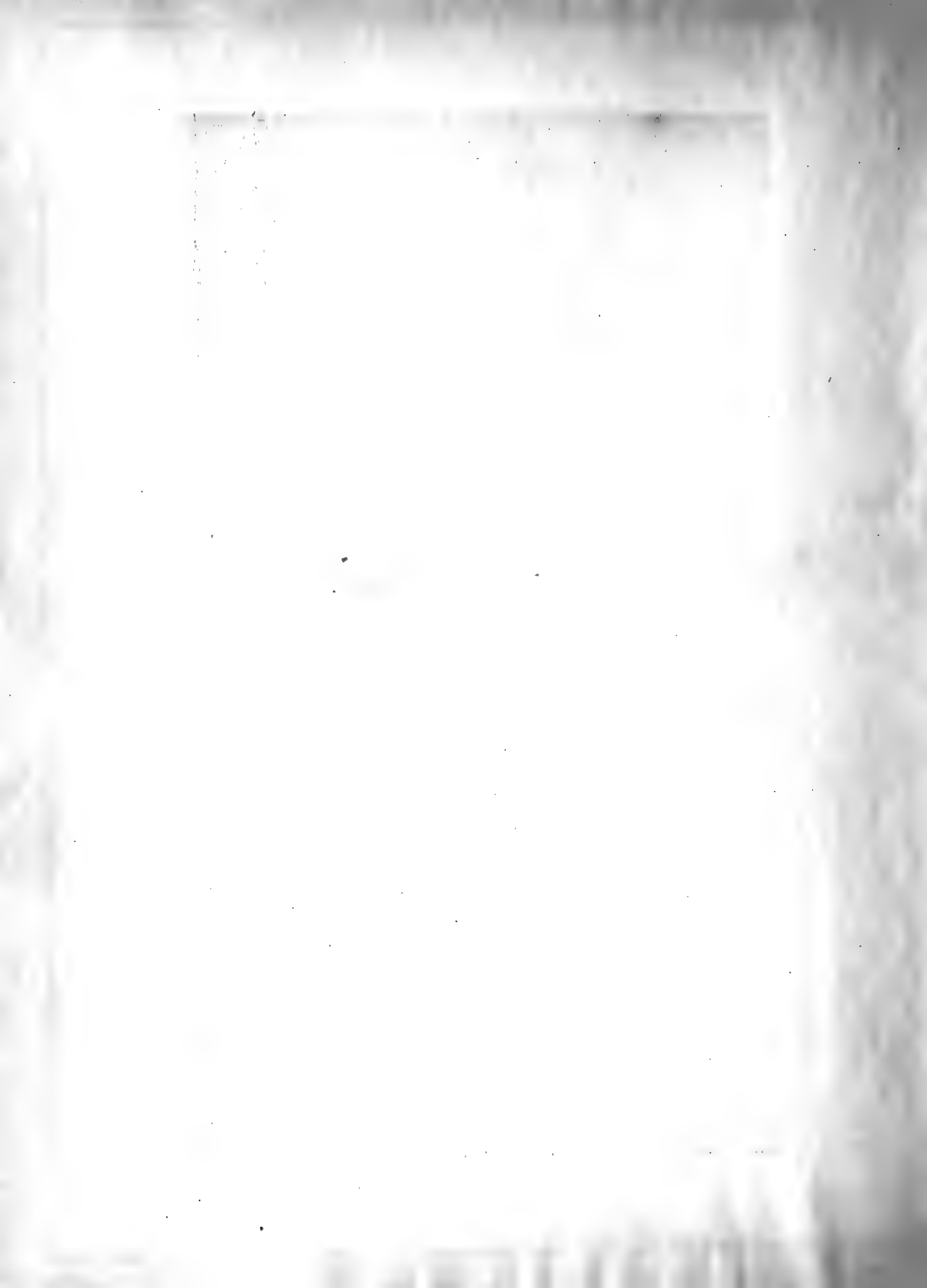


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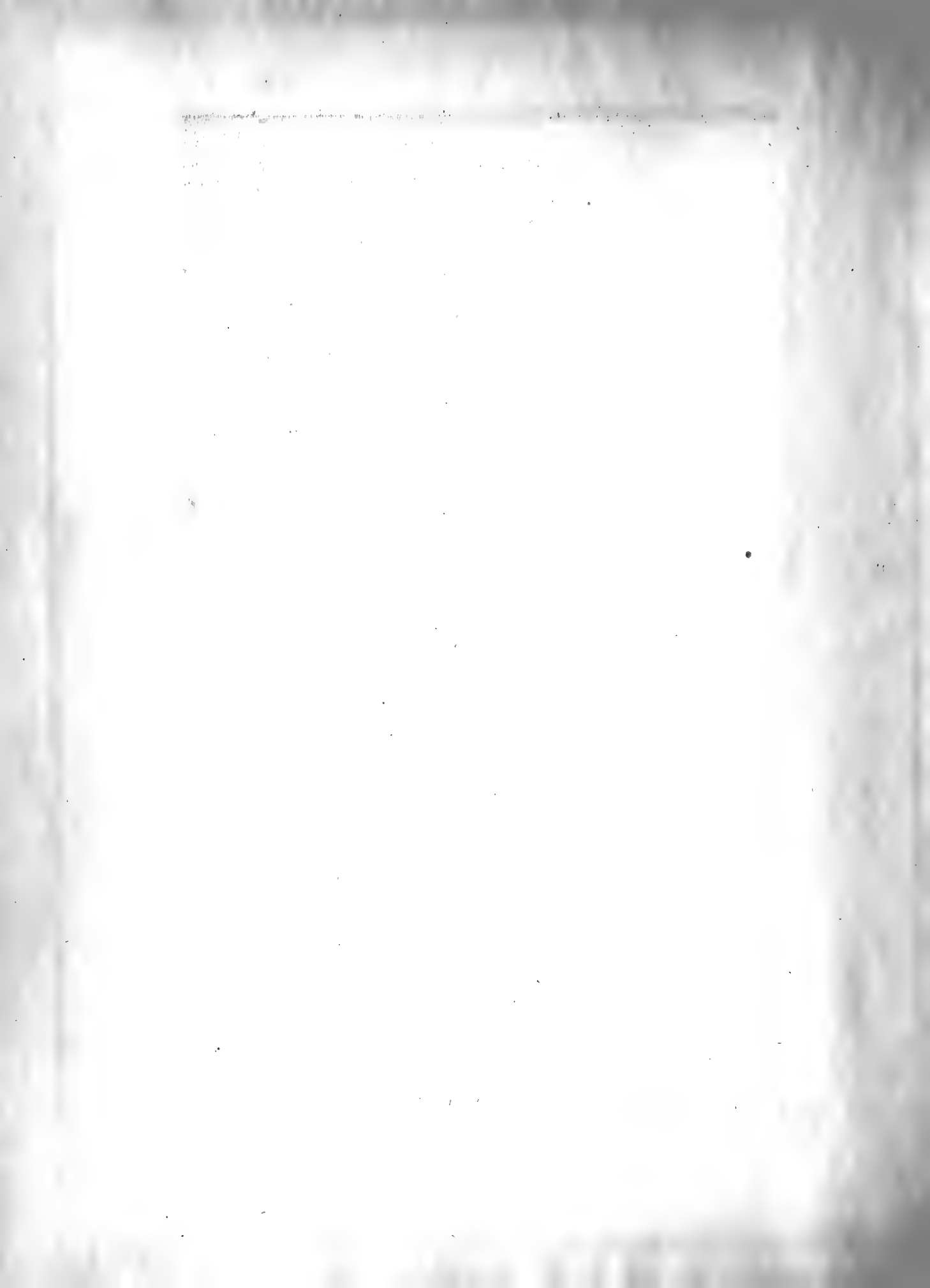
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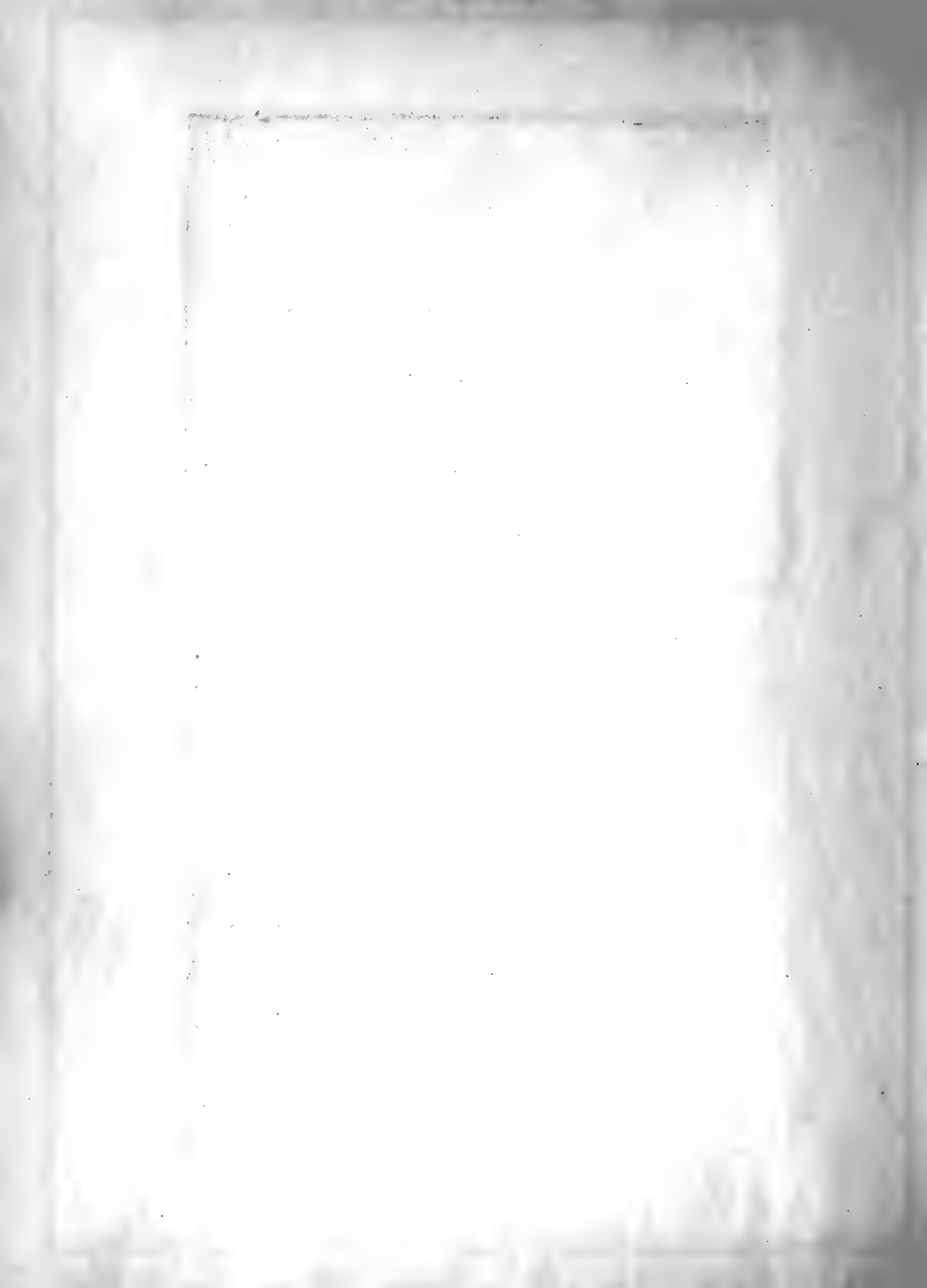


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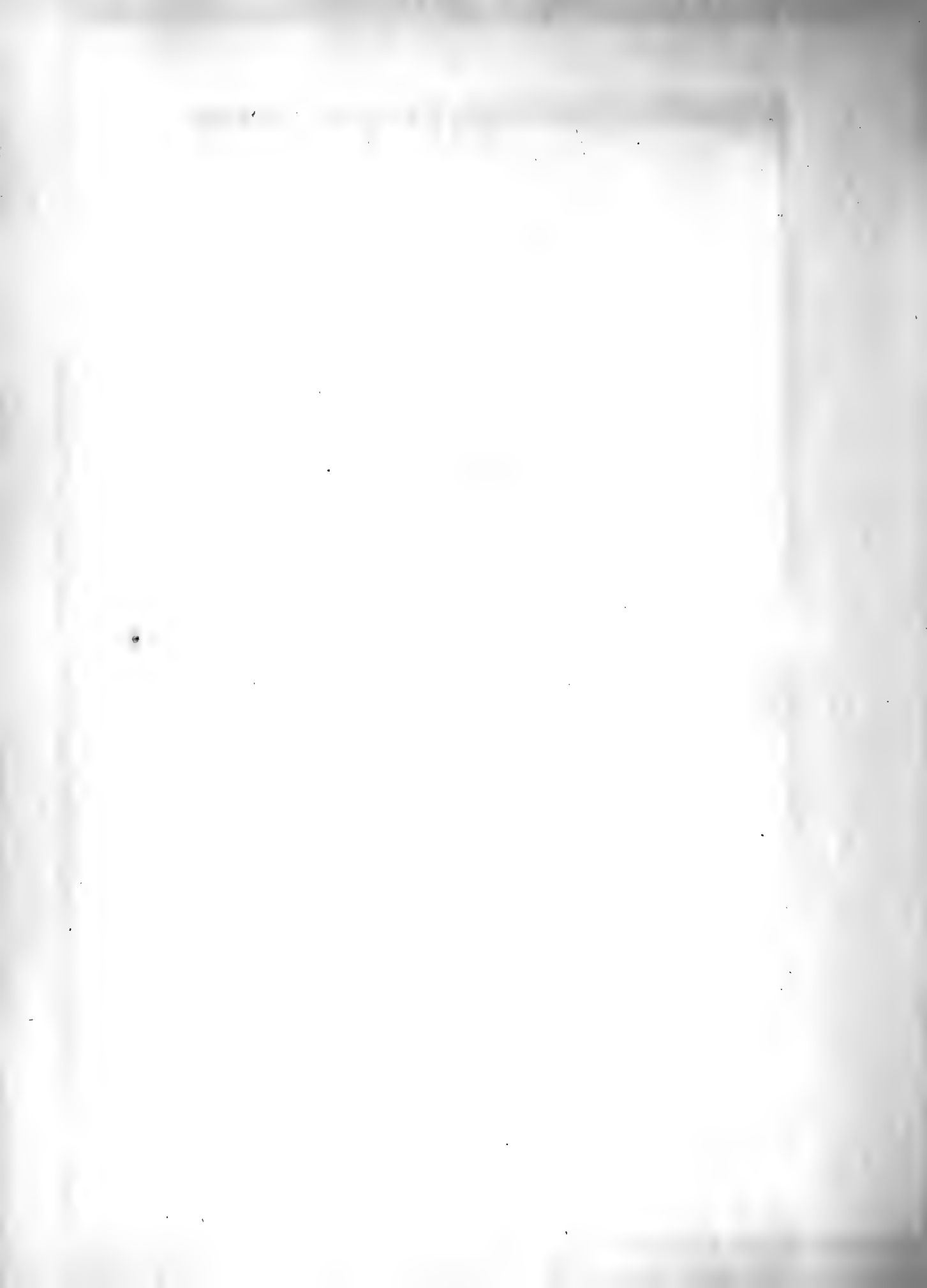


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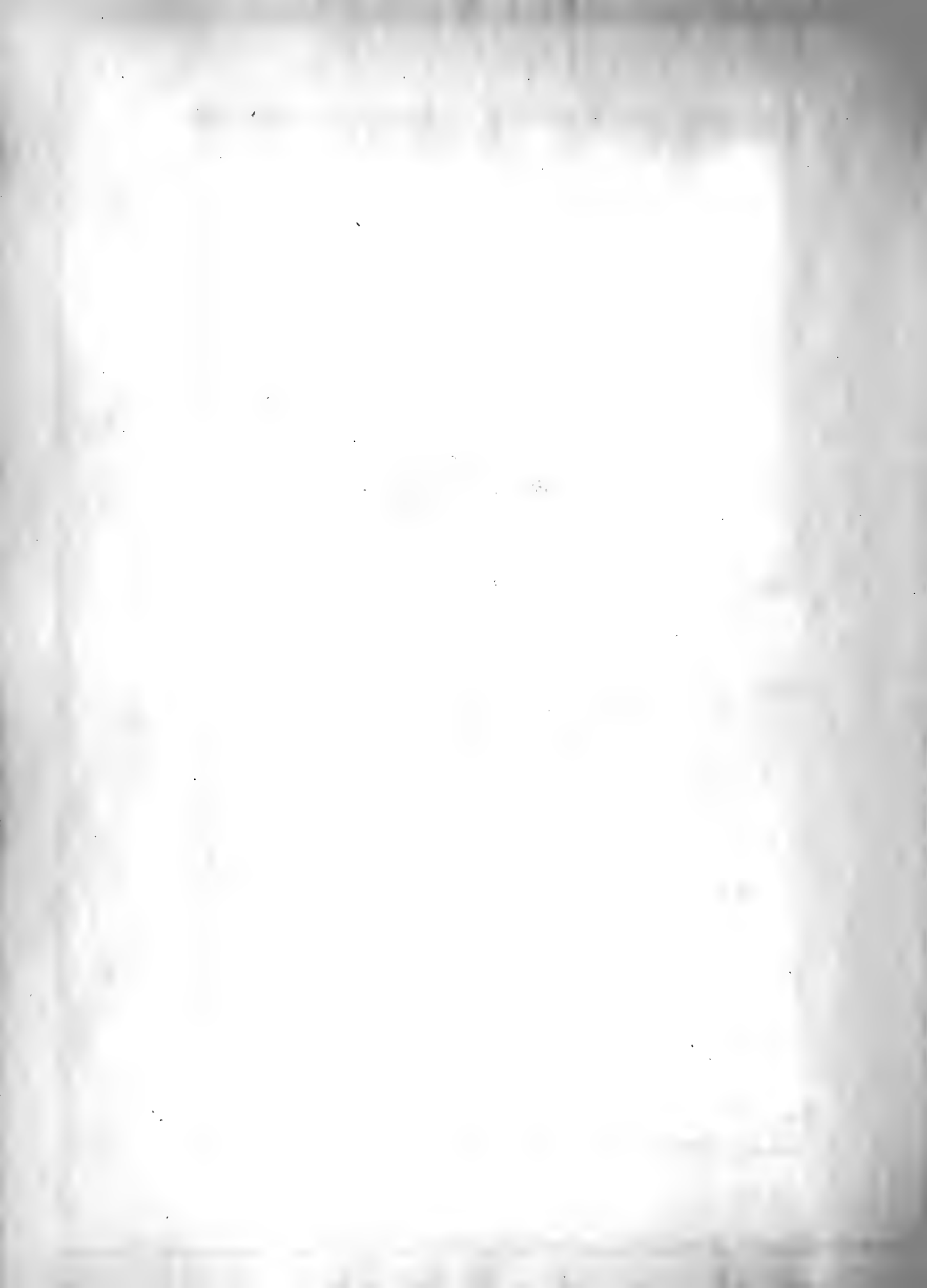


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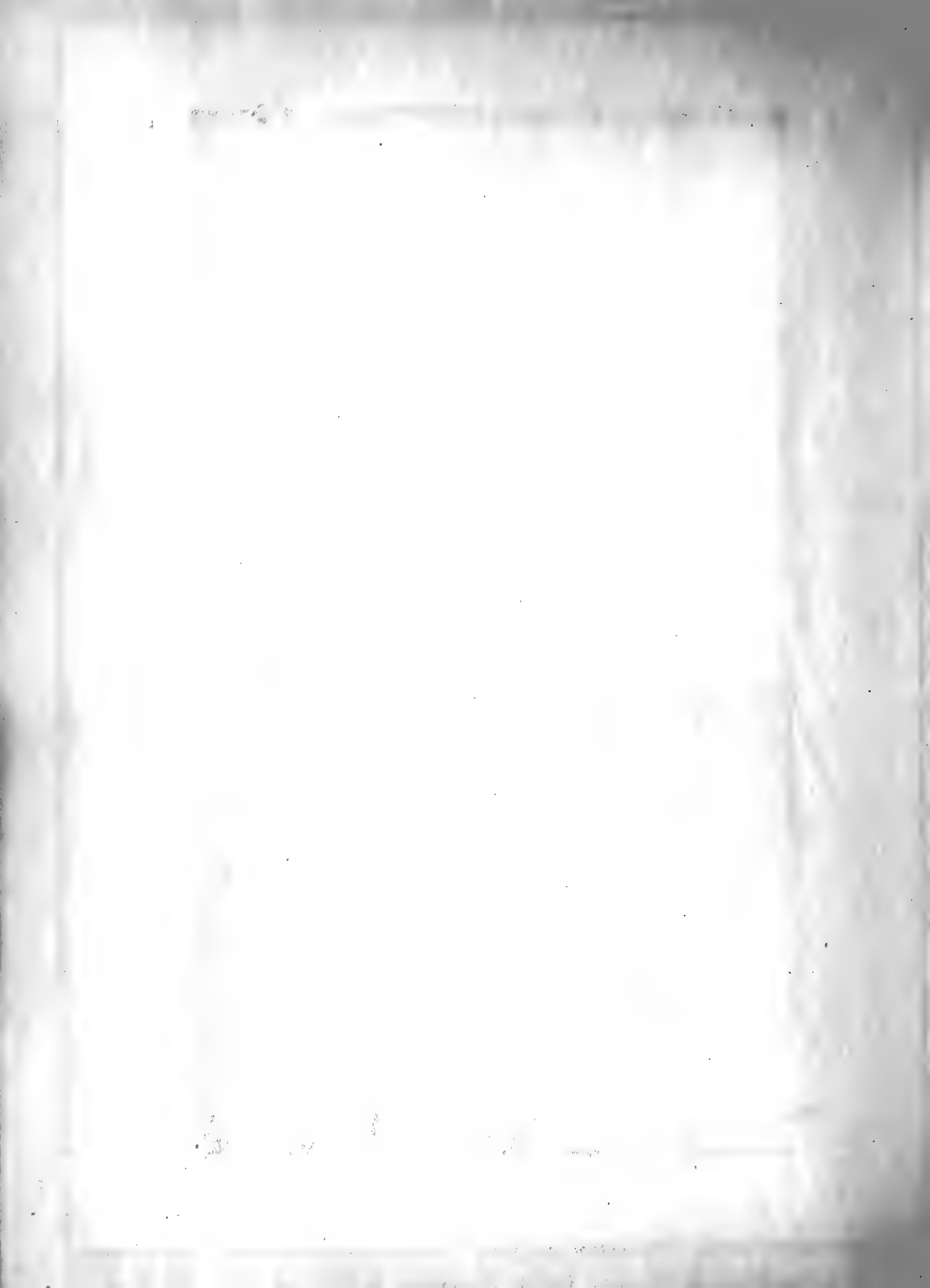


















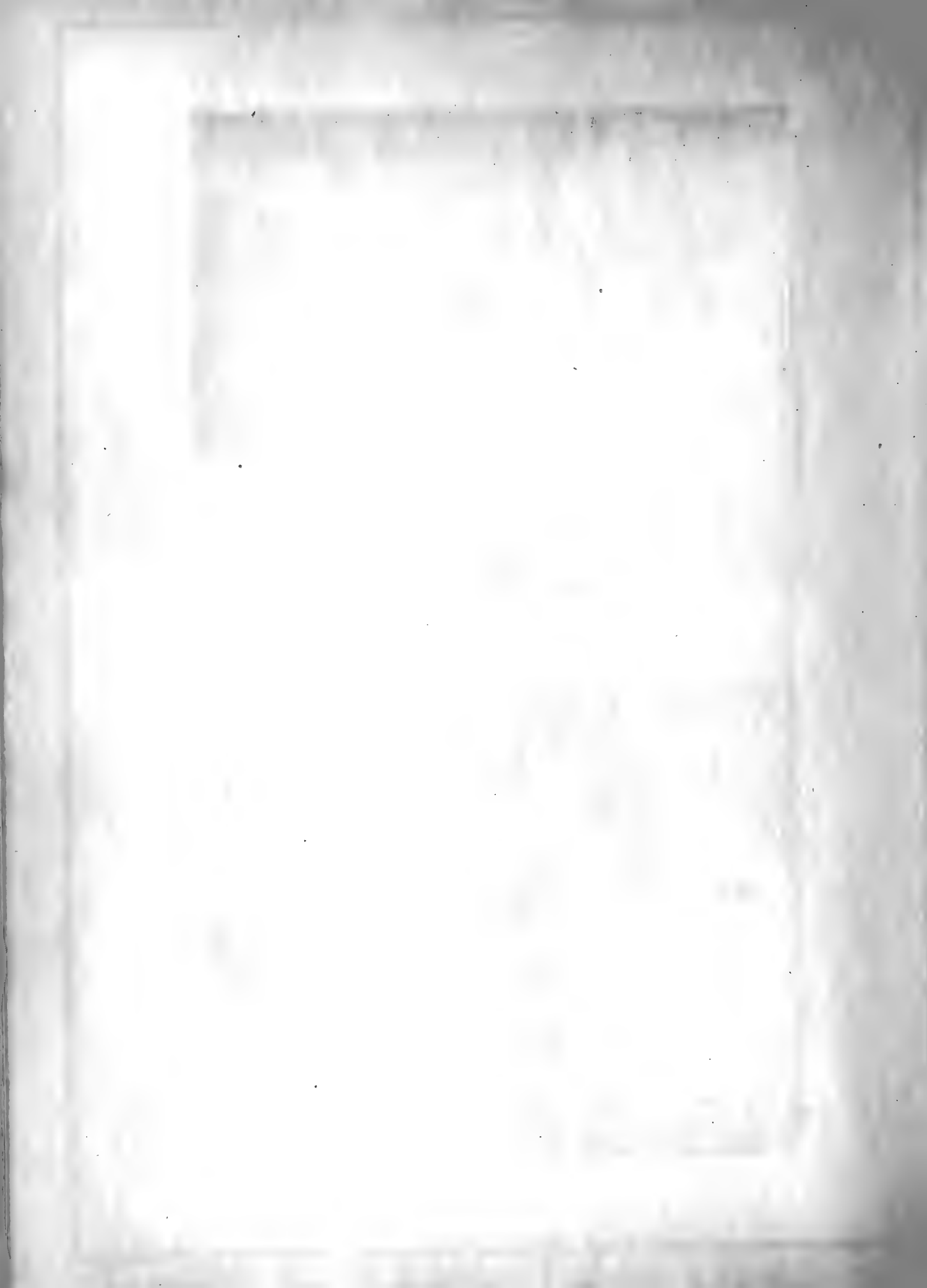




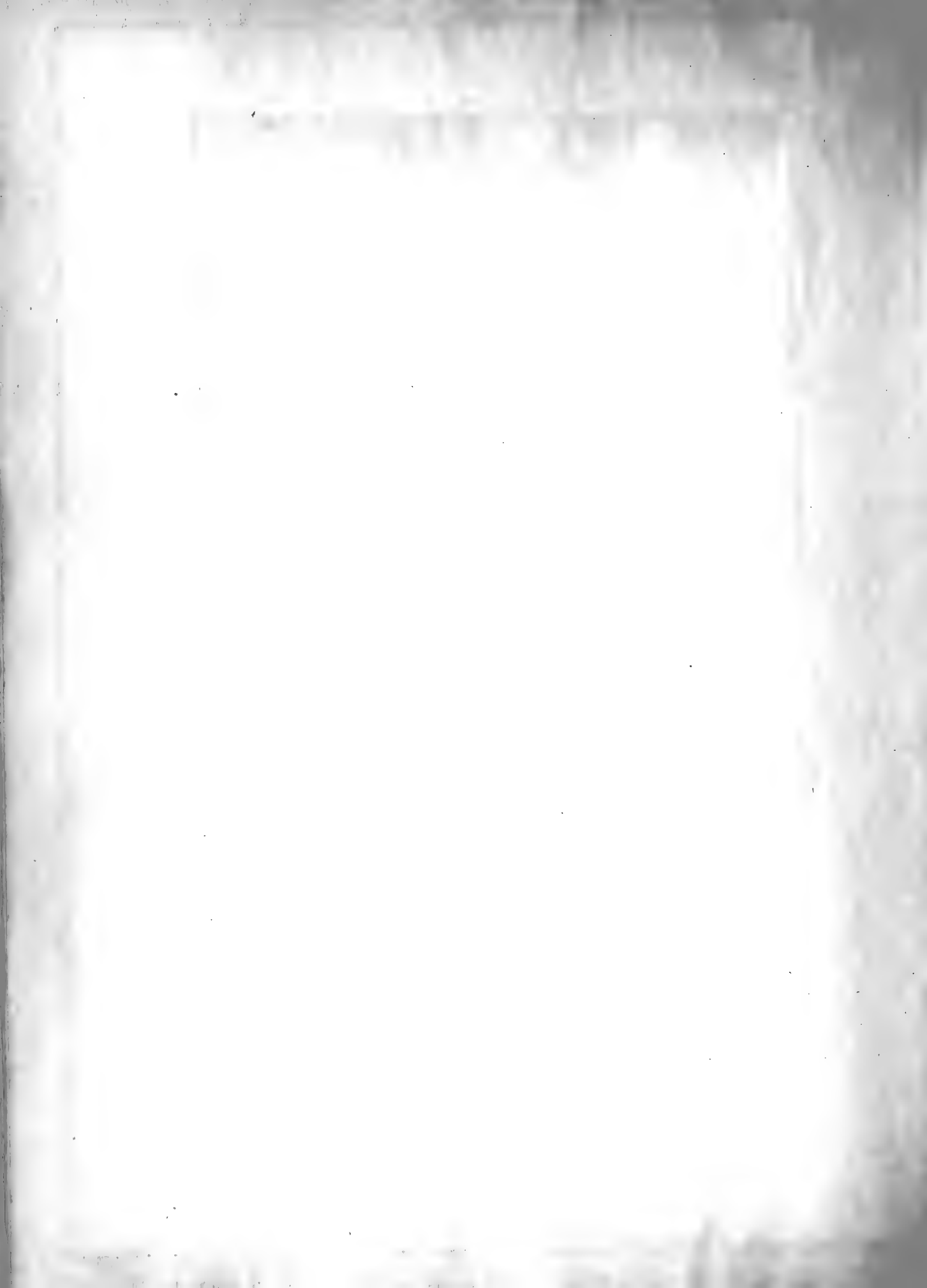














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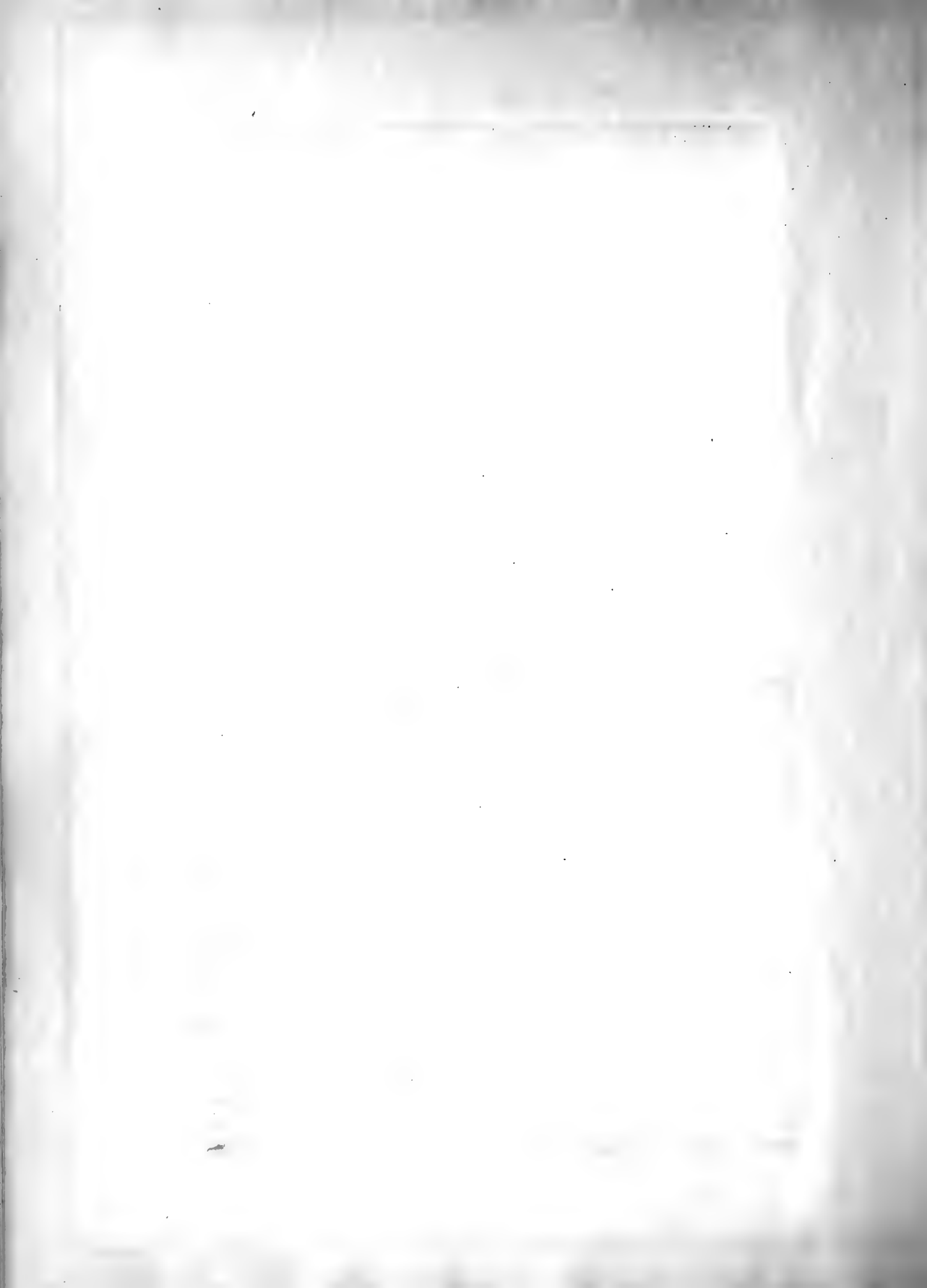












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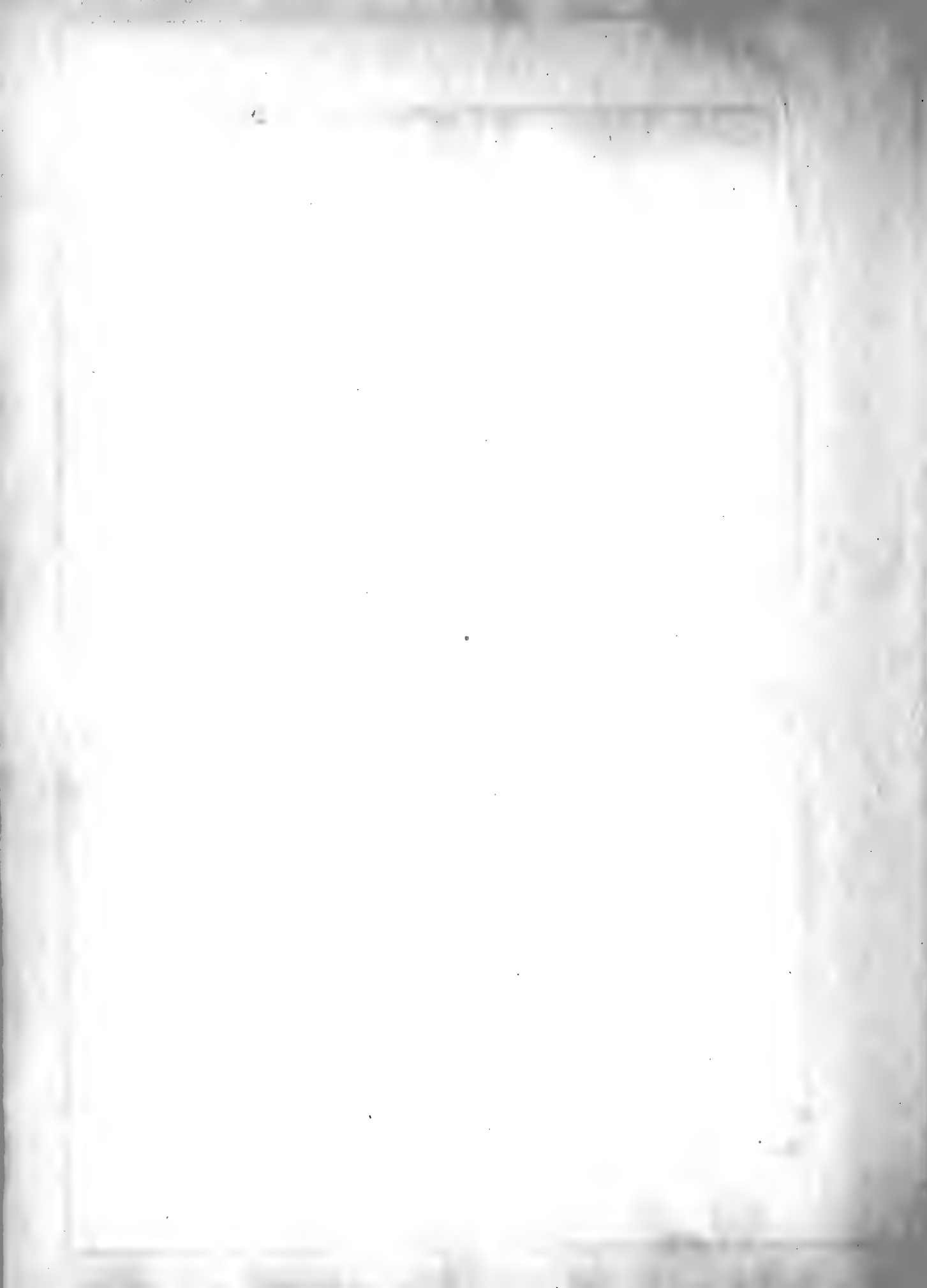


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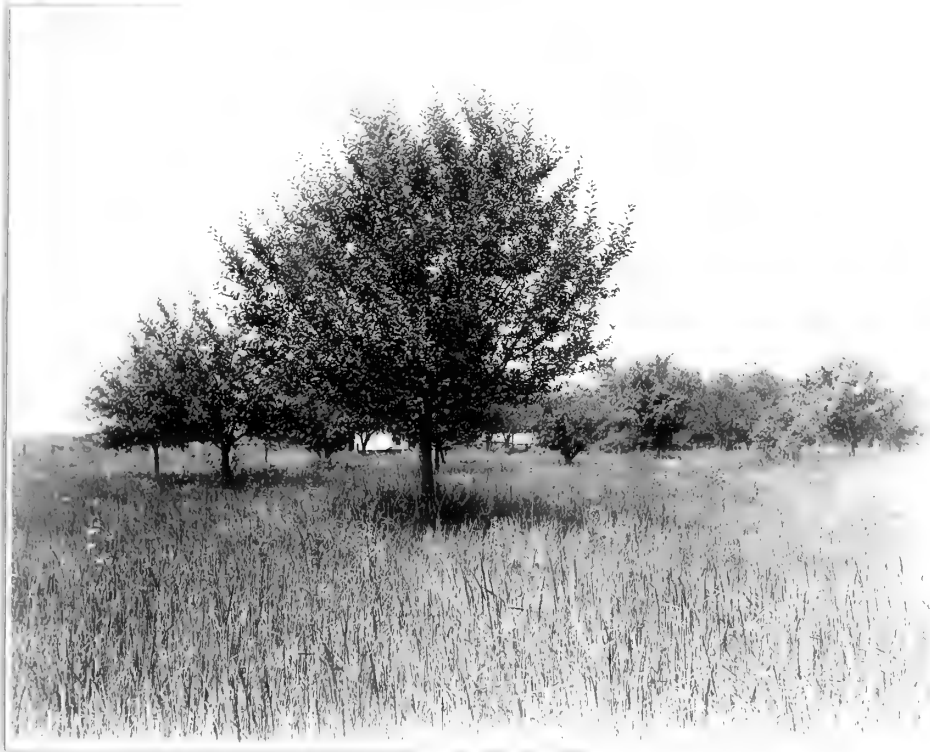


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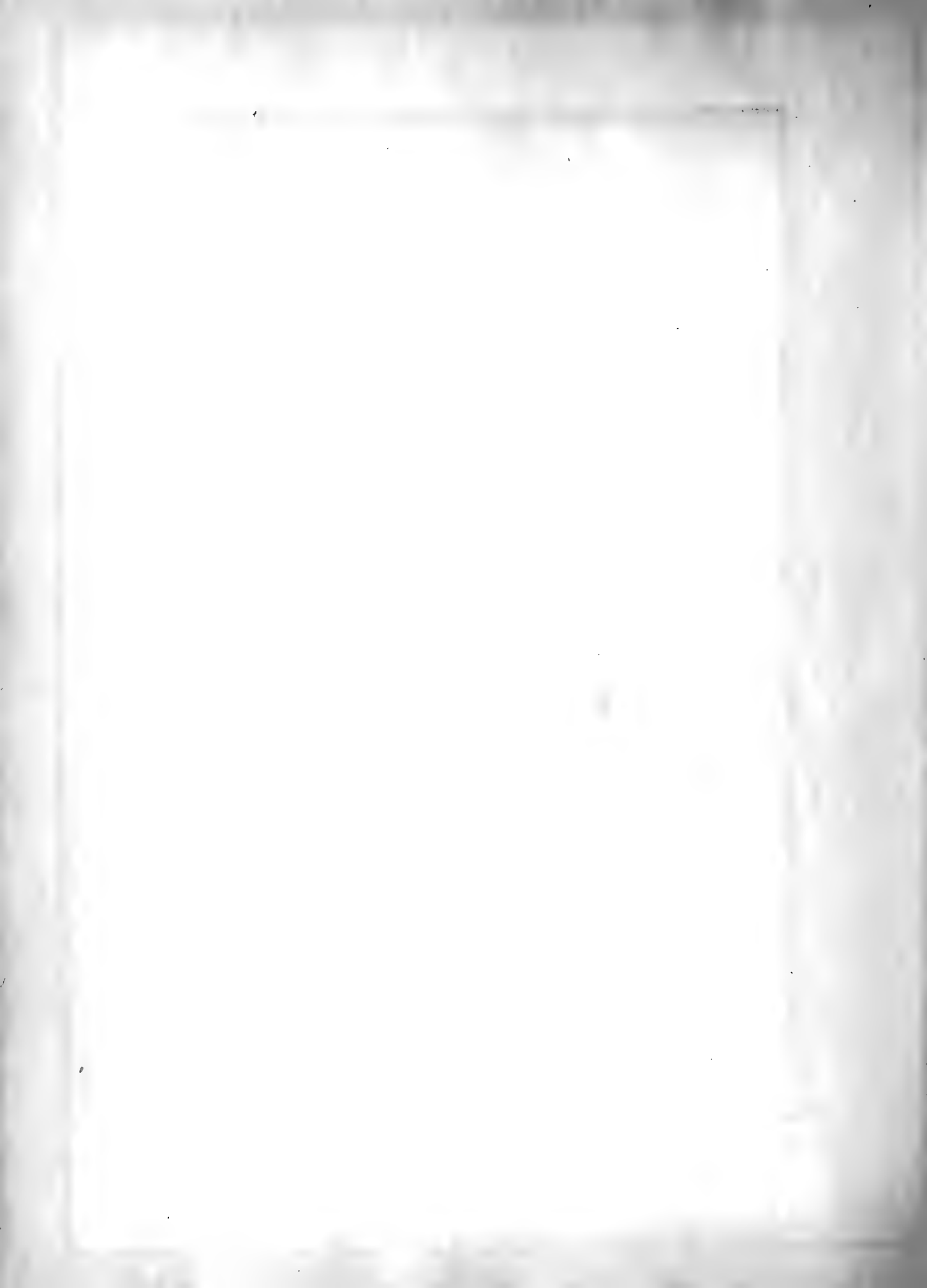
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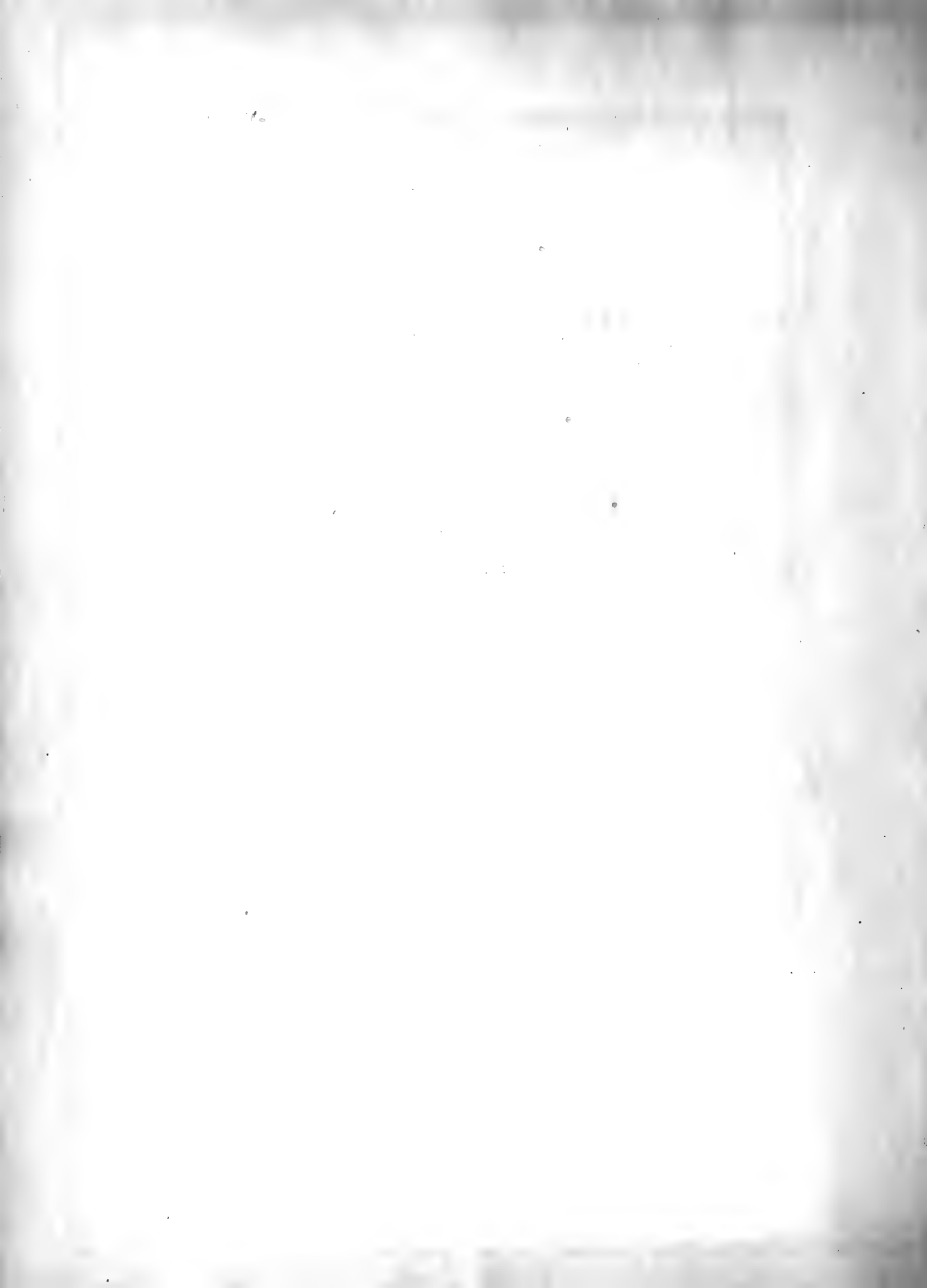


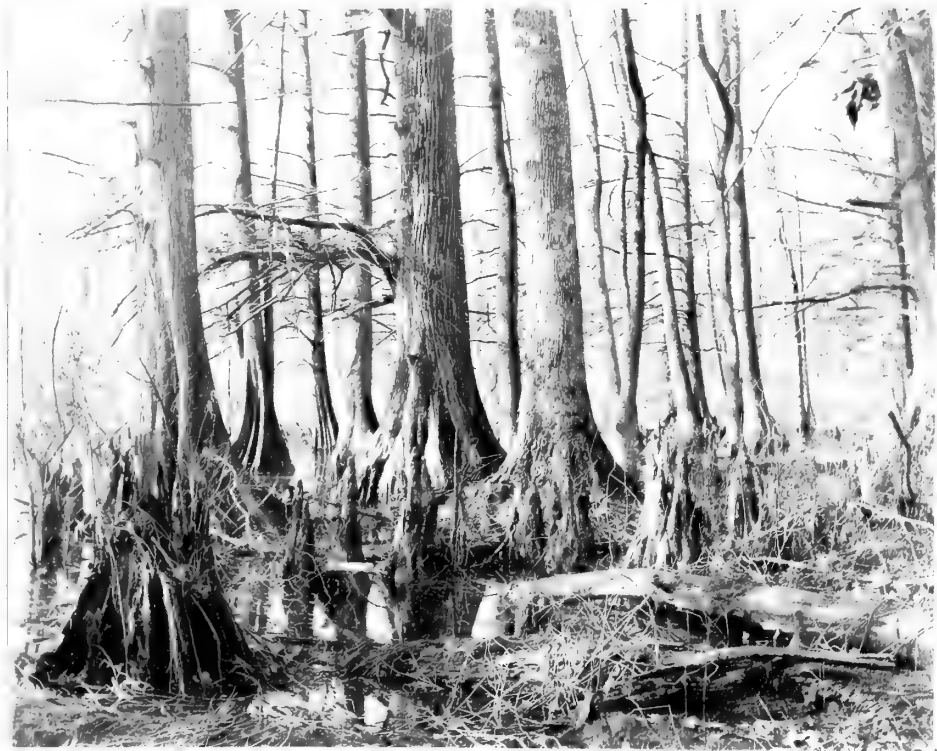
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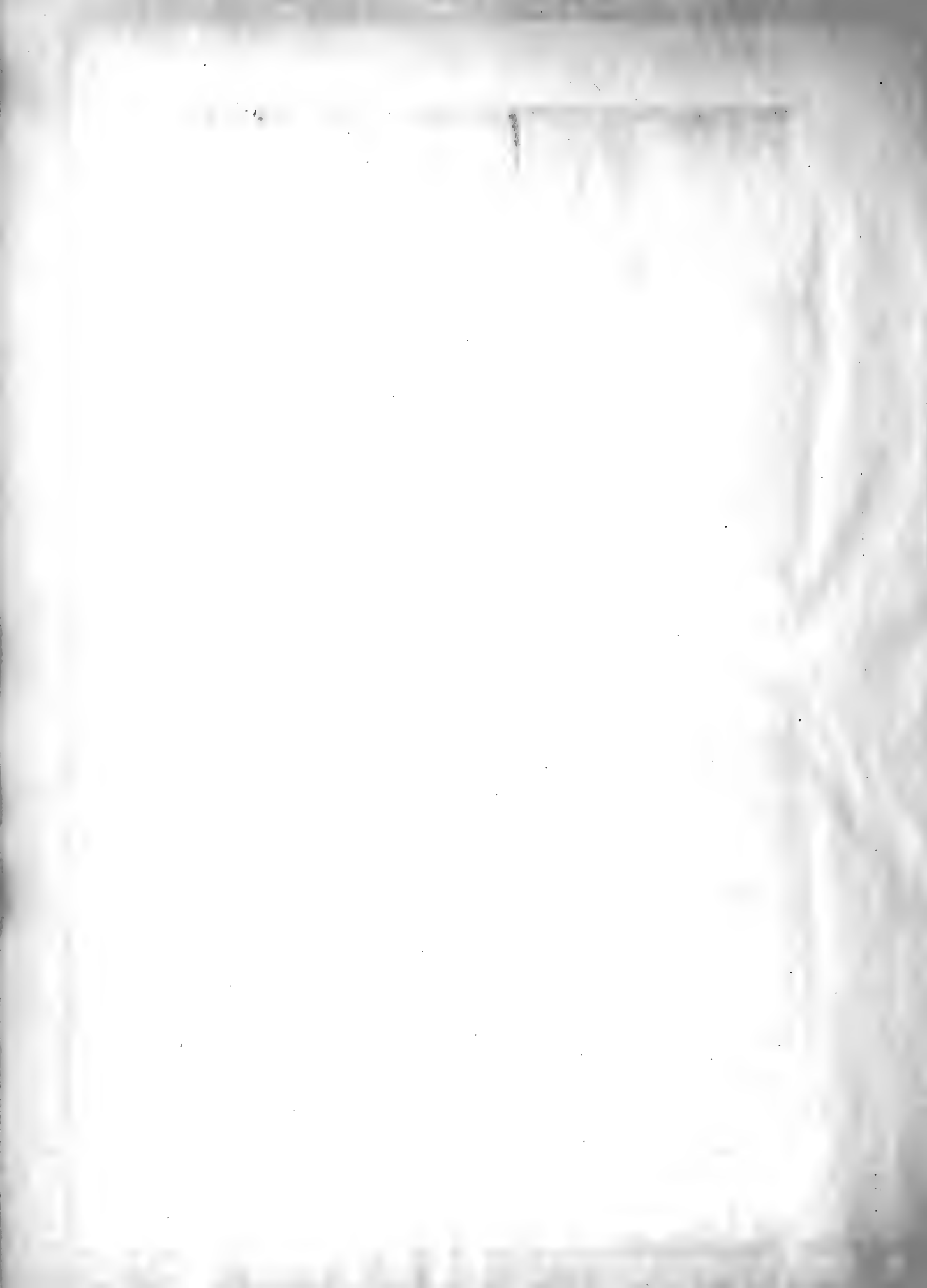


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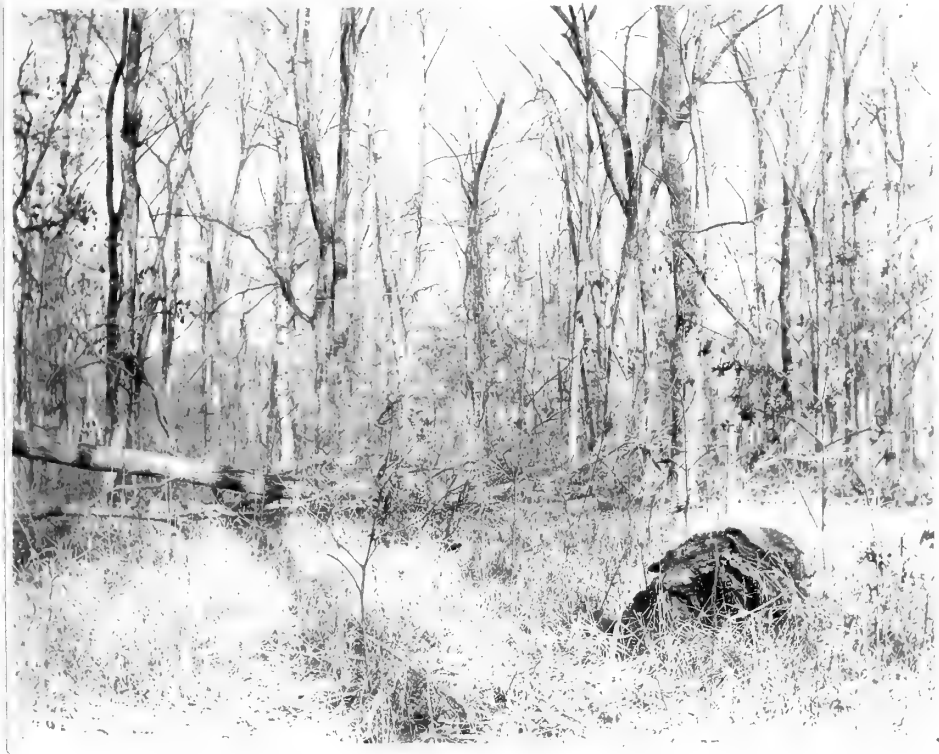


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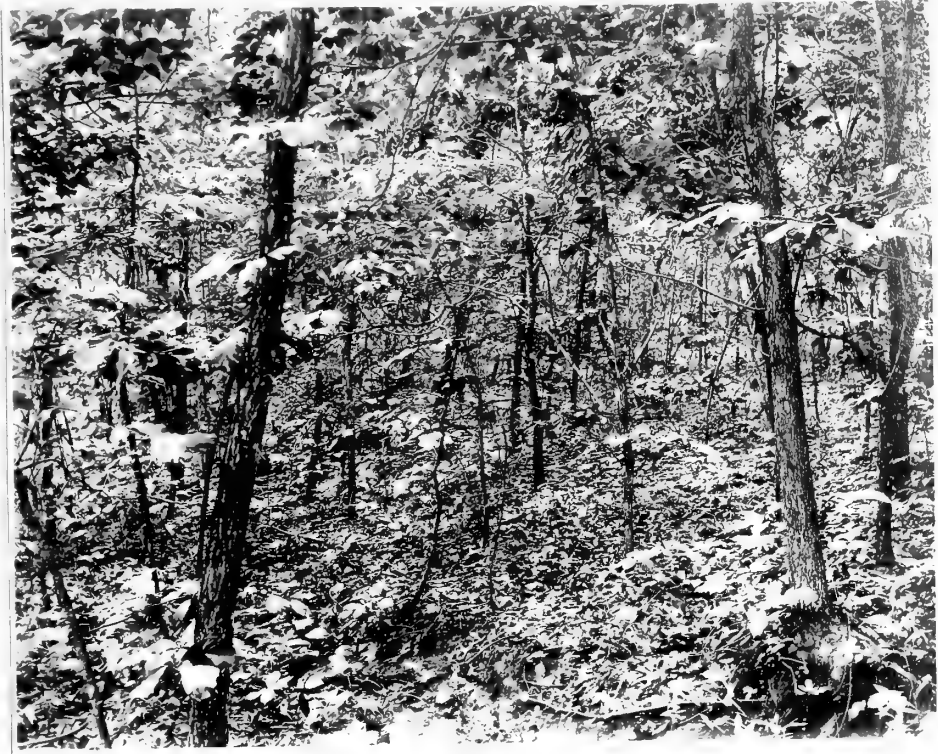
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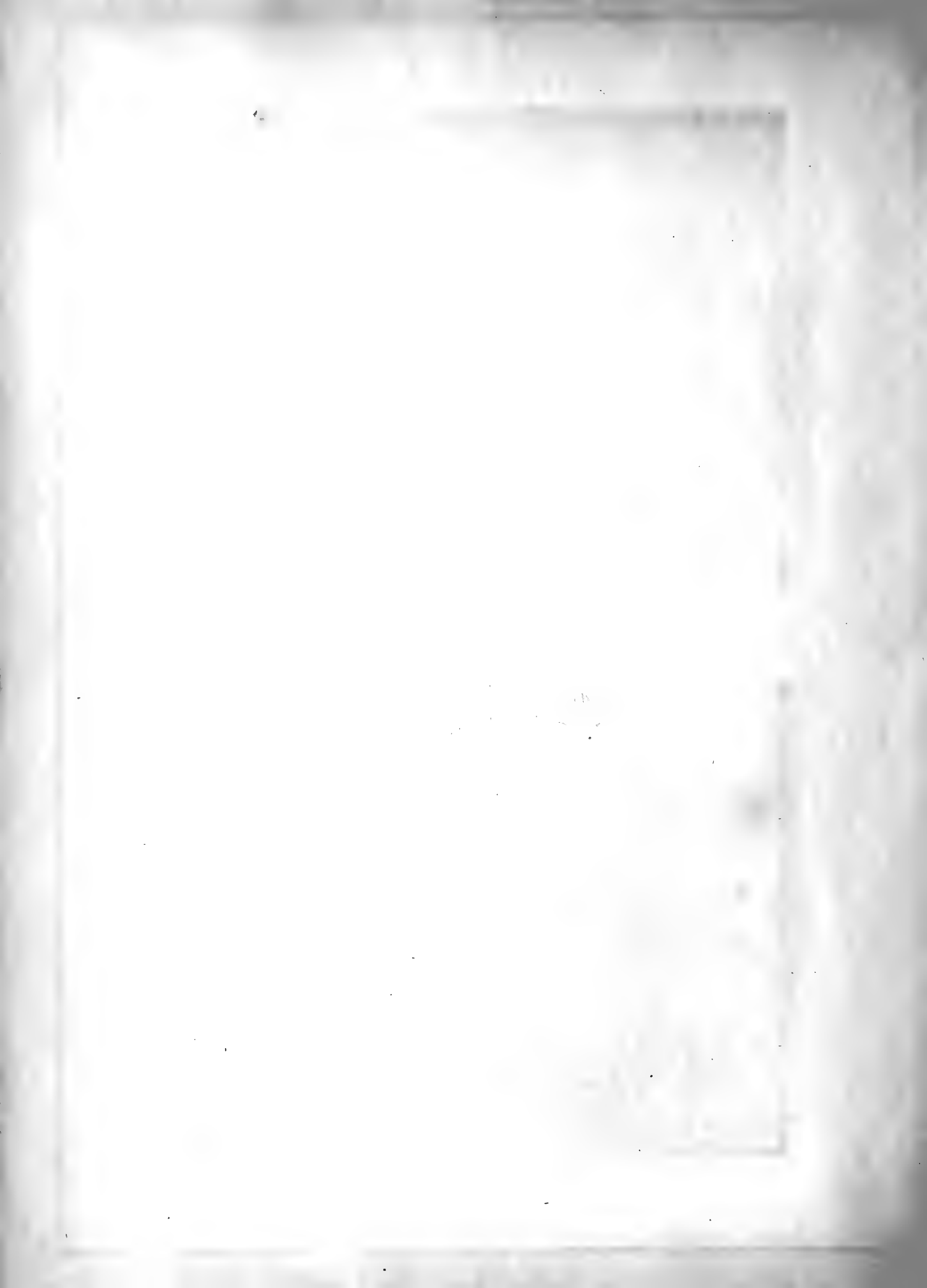


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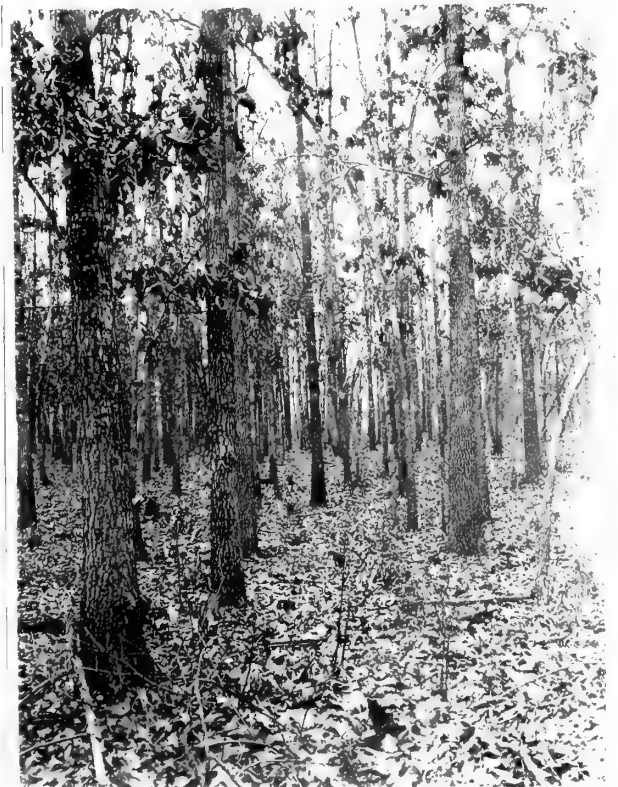
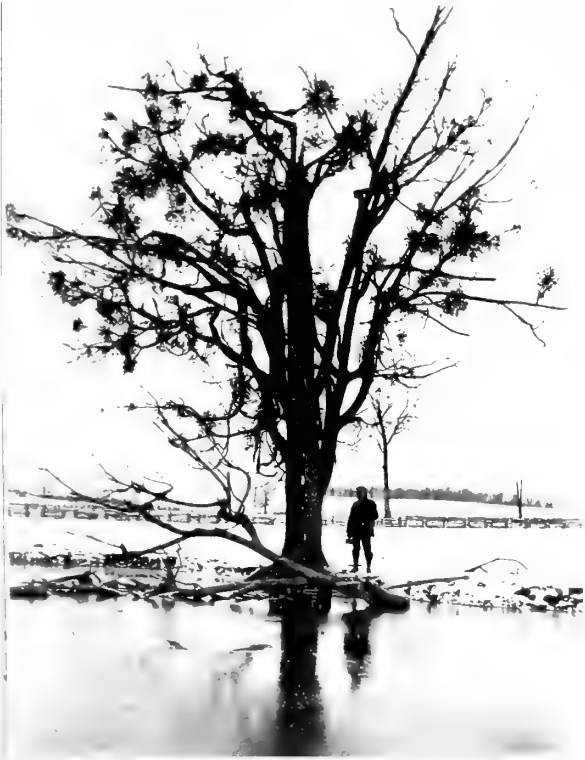


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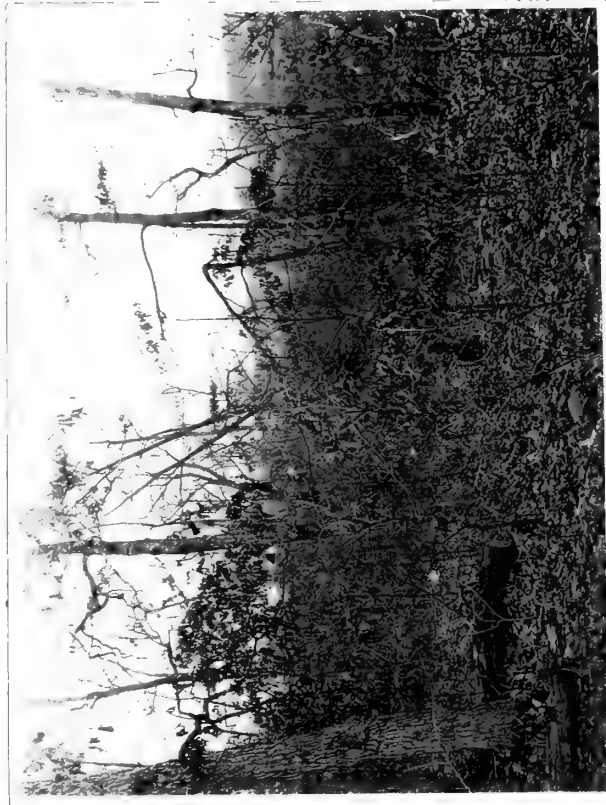
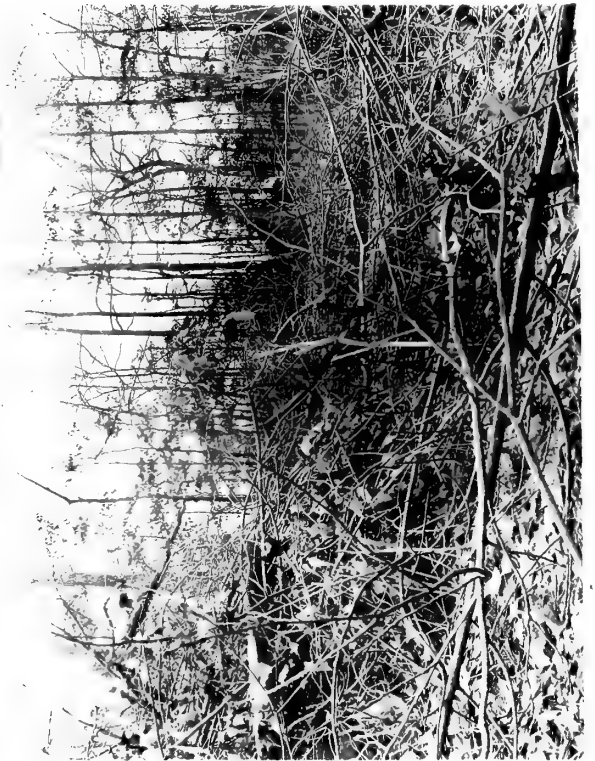


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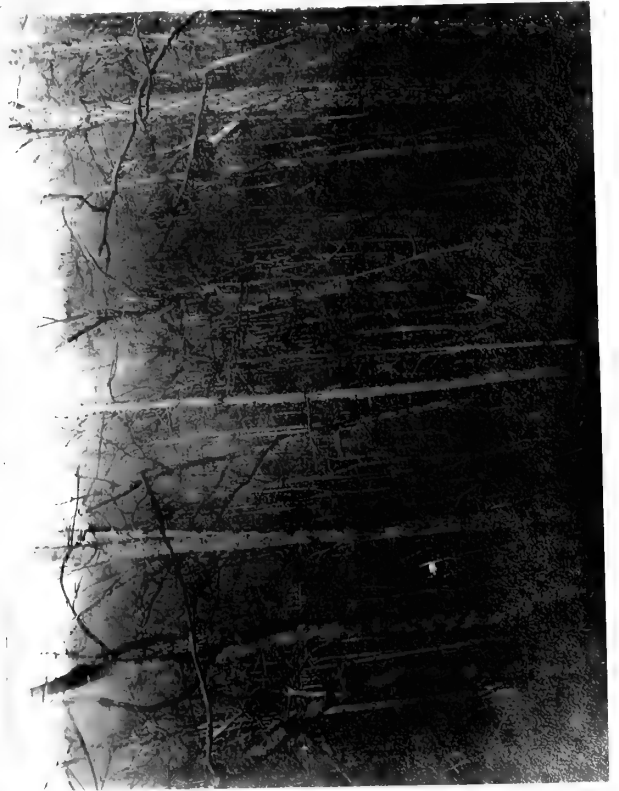




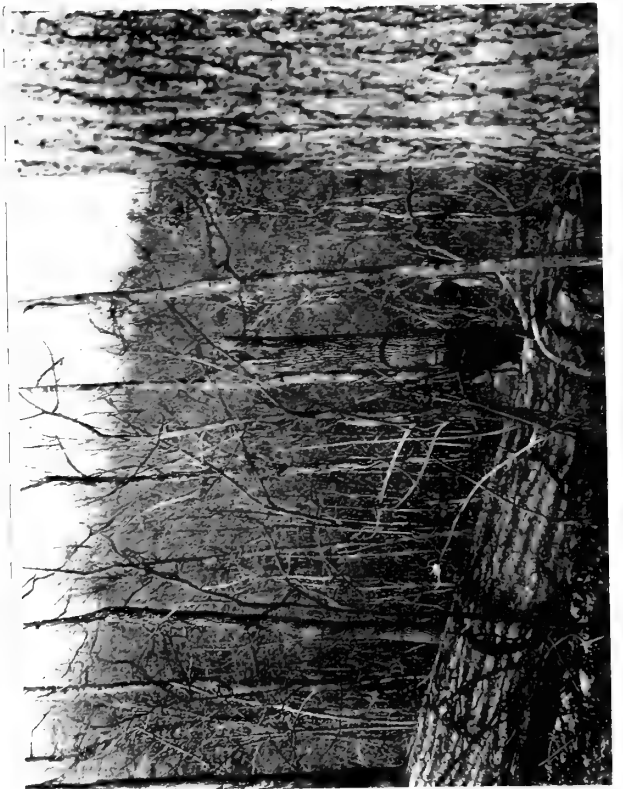
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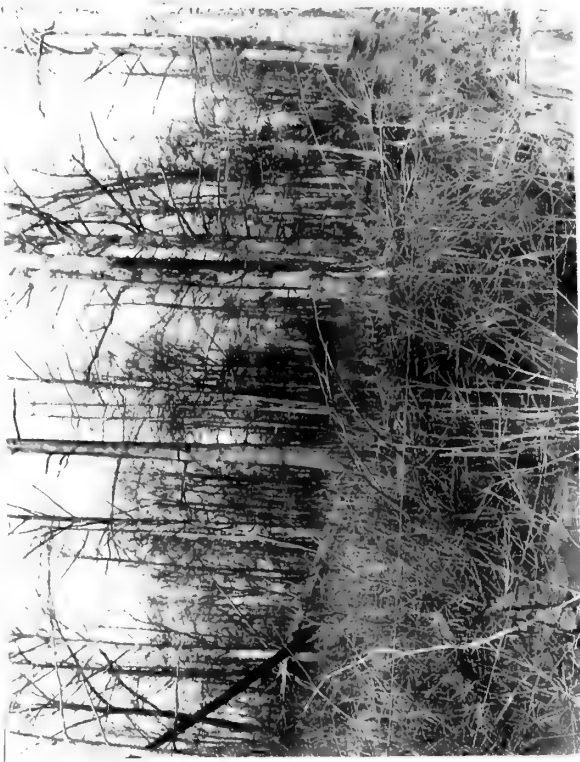
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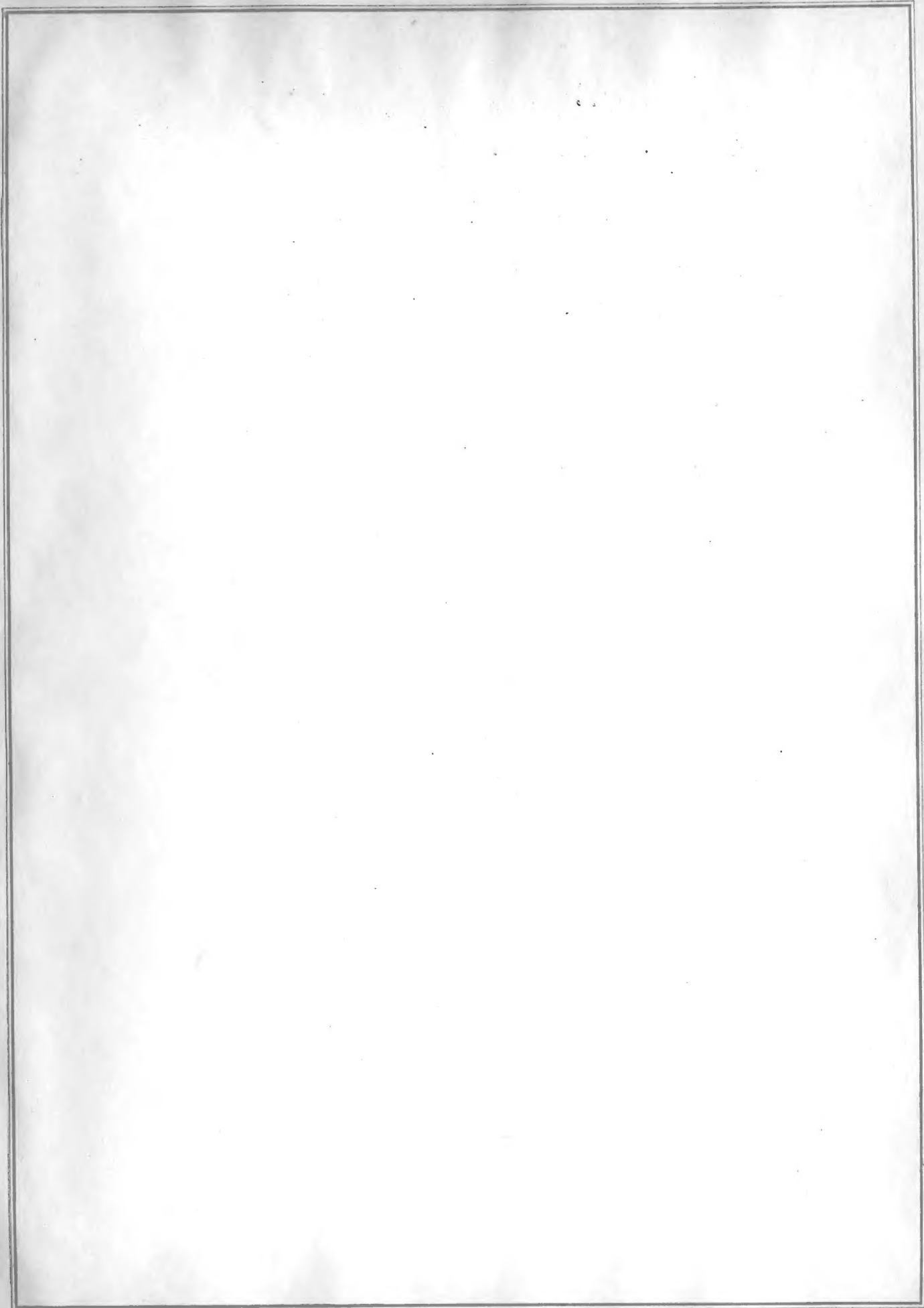


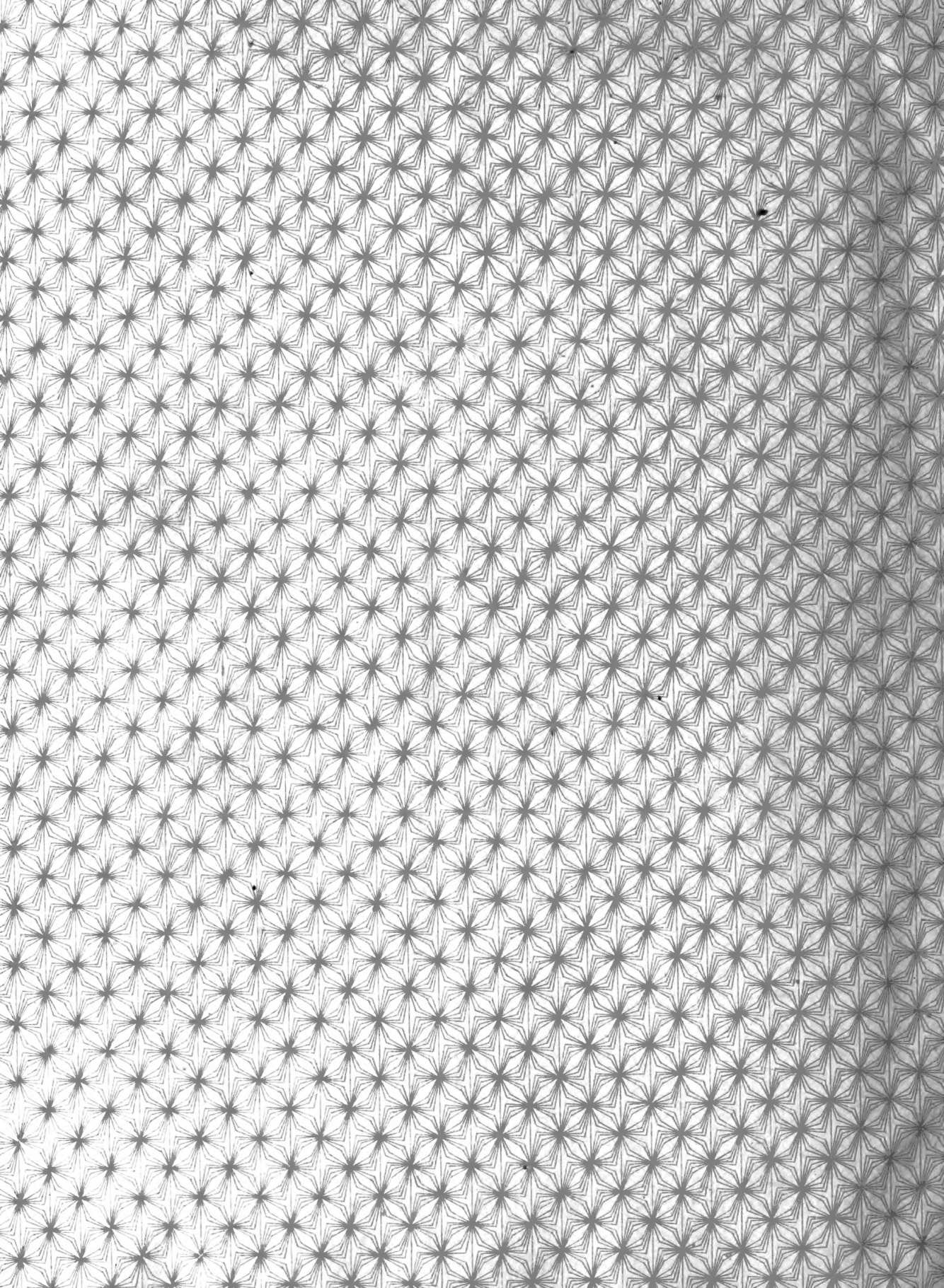
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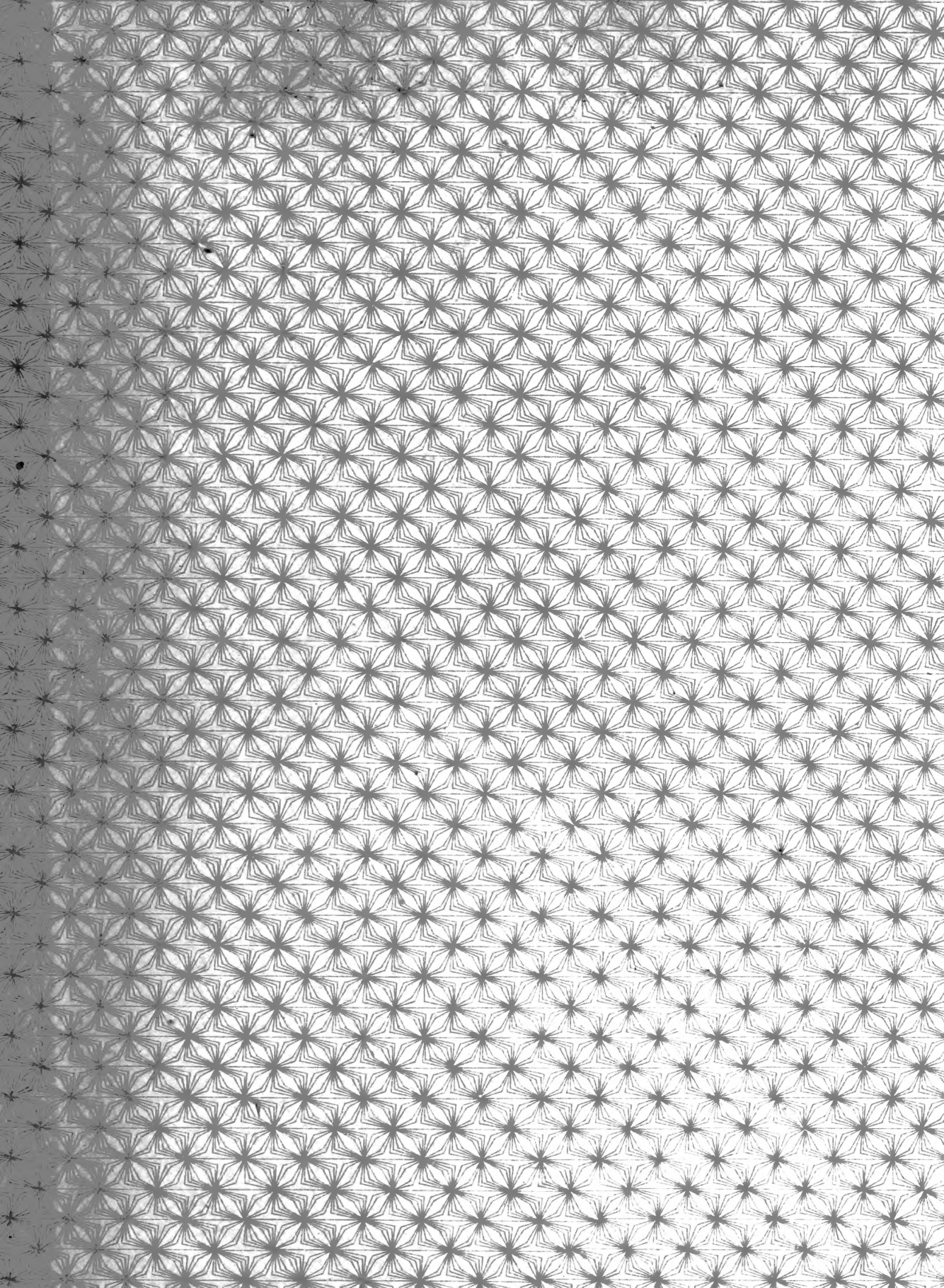












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