

IOWA

CONSERVATIONIST

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March, 1962

Number 3

MYSTERY AND BEAUTY—SPRING GOOSE FLIGHT



Jim Sherman Photo.

Carol Buckmann and
Jack Musgrove, Curator
State Historical Building

Along the broad alluvial flood
of the Missouri River, cars
along the highways, cameras
and binoculars scan the sky
high overhead, at times
barely distinguishable, is heard a
low, outgrowing Au-unk, Au-unk,
the "waveys." Mother Nature
as she has done for centuries,
out to present the most spec-
tacular mystery the world over.

The low hum of beating wings
rises to a loud whir and the
chorus of thousands of voices
fills your ears—the migration
of blue and snow geese is in
full swing.

Then comes the reward for
braving the mid-March chill, for
silhouetted against a flaming late
afternoon sky comes the evening
flight of the waveys. Lazily they
come, in long lines, broken V's and
small flocks like strings of beads
in the sky.

The irregular V formations
break into smaller ones, all over-
lapping and stretching for miles.
Then, as if by some prearranged
signal, they break formation,
swing and slideslip or tumble like
falling leaves, losing altitude rap-
idly as they head downward and
prepare to light. Descending from
the sky, necks extended, wings
thrown back and coral-pink legs
searching for solid ground, they
take two or three steps to break

their momentum and settle with
the flock. Their numbers increase
and the spongy ice of the lake
sinks beneath the combined weight
of thousands of birds.

Then after darkness settles, the
birds still come, flock after flock,
the concentration increases, some-
times over 50,000, until one thinks
there is no end. Here they rest
and feed on waste grain before
continuing their 2,600-mile flight
to their Baffin Island breeding
grounds.

One can watch them congre-
gated in tightly packed groups,
watch them take off to feed in the
morning and afternoon in some
nearby cornfield on waste grain.
They swarm around the ground
working through the fields, clean-

ing up what remains of last year's
crop. Then the small groups re-
turn to the concentration, and are
replaced by others shuttling back
and forth between resting and
feeding grounds.

Some flocks continue north-
ward not stopping with the con-
centration. But the flocks con-
tinue to come and the concentra-
tion increases until the peak is
reached from March 15 to 20 then
gradually decreases until all is
still. The first flock usually comes
around the first of March or the
last week of February.

Until recently, the flights of
these birds went almost unnoticed
except by people in the vicinity,
and the lives of these birds had

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CIRCULATION THIS ISSUE.....50,500

COMMISSION MINUTES**GENERAL**

Travel was authorized for three people to attend the Mississippi Flyway Council at Biloxi, Mississippi, February 26-27.

Travel was authorized for two people to the Missouri Basin Inter-Agency Committee at Omaha, Nebraska, February 15.

Travel was also authorized to the North American Wildlife Conference at Denver, Colorado, March 12-14 for six people.

Five people were authorized to attend the National Rifle Association National Convention in Washington, D. C., March 31-April 5.

Two people were authorized to attend the Great Plains Fishery Meeting at Bismarck, North Dakota, March 1 and 2.

Travel was authorized for four people to attend the AACI Annual Meeting in Provincetown, Mass., on June 4-7.

Three people were authorized to work at the Omaha Sports Show, February 19 through 25.

Sports Show Exhibits were discussed and the Commission authorized exhibit planning for out-of-state sports shows.

Subject to the approval of the Executive Council, the Director was authorized to hire an Administrative Assistant with a salary on a level of a superintendent.

A memorial to former Director, Bruce Stiles, was approved and Dr. Humiston and Jim Sherman were appointed to plan the placing of this memorial.

Travel authorization was given the Director to go to Washington, D. C., in February.

Authorization was given for the Traveling Wildlife Exhibit to show at the Fish, Game, and Conservation Commissioners' International Meeting at Jackson Hole in Wyoming in September.

Approval was given for various changes in the make-up of the IOWA CONSERVATIONIST magazine.

The Director of Public Relations was instructed to prepare slide series and maps dealing with regional tours in Iowa in cooperation

with the Governor's Tourism Committee.

PARKS

The recently acquired prairie area near Guthrie Center was officially named the Sheeder Area in honor of the Sheeder family which had the foresight to preserve this small remnant of Iowa prairie.

A delegation from Burlington asked for permission for the Y.M.C.A. to create a beach area on Geode for their use. The Commission requested further study on this proposal.

A request of the State University of Iowa to hold a camping workshop at Palisades-Kepler State Park, August 12-18, was approved.

An option was approved for 80 acres at \$225.00 per acre for Lake Anita located in Cass County.

WATERS

Departmental rules on navigation were rescinded to prevent duplication of Administrative Orders.

A permit was granted for the Highway Commission to construct a bridge on Highway No. 218 over the Skunk River in Henry County.

The Flint Creek Levee District in Louisa County was granted permission to riprap along the Iowa River.

Various adjustments in the accounts of the Waters Section Budget were approved for the balance of the fiscal year.

Approval was given to the Iowa Conference of Seventh Day Adventists for a permit to place sand on a beach on Ingham High Lake.

The Director was authorized to investigate an impoundment on Indian Creek near Council Bluffs to be built by the Army Engineers and the Director was ordered to give his approval if his investigation indicated no adverse effects.

The Director was authorized to modify Dock Permits Policies when permit holders show reasonable need.

COUNTY BOARDS

Black Hawk County received approval for a purchase of 26 acres at the east edge of Evansdale, a suburb of Waterloo, for \$11,000 to be used as a recreation area.

Black Hawk County also received approval for an addition to Black Hawk Park of 70 acres along the Cedar River at a cost of \$3,000. An island is included in the purchase and will be used as a camping area for boaters.

Delaware County received approval to acquire a Dunlap River Access of one acre as a gift from Mr. and Mrs. Herman Dunlap for use as a parking area.

Jackson County received approval for an addition to Bellevue Roadside Park of 20 acres at a cost of \$80 per acre.

Linn County received approval for acquisition of Dark Hollow consisting of a gift of 150 acres from Mr. Sutherland C. Dows, located adjacent to Palisades-Kepler Park to be used as a botanical and biological preserve with a mini-

THE MUDDY PICTURE ON THE MISSOURI RIVER

Jim Sherman

The Missouri River extends for 192 miles along the western boundary of Iowa. During the 1930's the U. S. Army Corps of Engineers adopted a permanent channel design for this stretch of river. This design included many sharp loops and turns which were intended to slow the velocity of the river and help control erosion. The boundary compact between Iowa and Nebraska was based on this design placement of the river which was far from a straight line.

Ice damaged or removed the pilings which established and maintained this irregular course of the river.

During the 50's a new channel design between Council Bluffs and Sioux City was adopted. This new design eliminated many of the curves in the channel. Fourteen of these curves were large enough to form lakes after the river channel was diverted to a straight line. Due to the narrow, semi-circular outline of such lakes, they are usually called oxbows.

Eleven of the oxbow or cutoff lakes are on the east side of the present course of the Missouri River. Three of the eleven oxbows were silted full within two years of their creation.

Eight oxbows on the east side of the river still have some recreational potential. Five of the remaining eight oxbows are partially lost through siltation.

Only three of the oxbows lie entirely within the boundary of Iowa. Two of these, Tyson Bend and California Bend, were lost from siltation in 1960.

Winnebago Bend, seven miles southwest of Sloan, lies entirely within the state of Iowa. The Conservation Commission is now consulting with the army engineers in an attempt to devise a program which will prevent siltation of this 700 acre lake.

Seven lakes with a potential for recreational development lie partly in Iowa and partly in Nebraska. They include Dakota, Snyder, Glovers, Omaha-Mission, Blackbird, Tieville, and Middle Decatur Bends.

What is being done to preserve these lakes and develop them for public use?

The 59th General Assembly appropriated \$75,000 for Missouri River development.

On the east half of the old channel Iowa owns the stream bed to the high water line and the islands therein. The west half of the old channel does not belong to the state of Nebraska but is the property of the Nebraska riparian land owner. The Nebraska Fish, Game, and Forestation Commission has recently begun a program of buying shoreline and oxbows on its side of the river. The Iowa Conservation Commission has bought access to Tieville and Middle Decatur Bends and has already installed boat ramps and docks. The Iowa Commission has acquired options for access areas on Snyder, Winnebago and Middle Decatur. Protection from siltation on these seven lakes still awaits joint action by Iowa, Nebraska and the federal government. Obviously the lack of settlement of the Iowa-Nebraska boundary problem has complicated the job of preserving these areas which lie partly in Iowa and partly in Nebraska.

Major island areas (about 500 acres each) created by the channel change include Wilson Island, Deer Island, and Tyson Island. The Conservation Commission has now started development work on Wilson Island. This area will provide camping, picnicking, river access, and hunting. The Iowa Attorney General's office has court suits pending in an effort to establish state ownership of seven other island areas.

Time alone will answer the question, "Are these measures adequate to save the Missouri River for outdoor recreation?"

mum of development planned for the area.

Cherokee County received approval for development plans for two access areas on the Little Sioux River called the Martin Area and Nelson Area for use as river access and picnicking.

Jackson County received approval for a development plan for the Joinerville Area for use as a boat launching area, parking area, picnicking, and camping.

Assignment of the Copple Option at Snyder Bend on the Missouri River was approved for Woodbury County. The area consists of 34 acres.

FISH AND GAME

1962 fishing seasons and regulations were approved, which were similar to the 1961 seasons and regulations.

A Commission Policy was established concerning game bird feeding programs and participation by the Conservation Commission which requires the approval of the Director's office for such activity.

Experimental stocking of game birds including Iranian Blackneck Pheasants, Reeves Pheasant and Bobwhite Quail was approved.

A policy on holding wild deer by public institutions was approved.

Hiring of a Unit Game Manager for the Coralville Game Unit was approved.

FORESTRY

The State Forester gave a report on a study which provides the work program for 40 prisoners in the Yellow River Forest Area Prison Camp for the next 20 years.



J. N. (Ding) Darling.

Jim Sherman Photo.

J. N. (DING) DARLING

Although 12 years have passed since Jay Darling retired as the *Register's* cartoonist, he continued to come frequently to his studio in our building, and he never lost his buoyant interest in people and causes.

So to many of us who had worked with him he still seemed a member of the staff when he died Monday morning.

It is tempting to speak of him now in eulogistic terms, but few things would have embarrassed him more than a eulogy. And nothing we could say now would add to the prestige and stature of an artist who had been recognized for decades as a leading American cartoonist, who had twice been awarded the Pulitzer prize, and whose position was established, long before his death, in the tradition of the great cartoonists and satirists reaching back from Thomas Nast to Daumier.

It seems, therefore, a more appropriate tribute to try to identify some of the characteristics of Ding's achievement.

Those who worked close to Ding were always impressed first by how hard he worked. Everyone knew he had great talent—talent that few men are privileged to have. Only those who observed him knew that his working habits, his intense concentration, the exacting standards he set for himself, were as much responsible for his success as his talent.

Several times during his career, Ding used as a theme the thought that the American continent was not developed with a 40-hour week. He did not mean that he wanted to turn back the clock to the 12-hour day or the 7-day week. It was his way of stating vividly a deep conviction that there can be no creative production without a respect for work and a satisfaction in the performance of it.

No one had to work close to Ding to know that he had integrity, strong convictions and the courage to express his views. He once said, "My convictions may not be worth much to the world, but they are my own, and if I am going to go through life expressing anybody's convictions, they are going to be mine."

It was this quality which gave force and vigor and originality to his work and made him a major influence in the life of his era. Whether readers agreed with him or not, they found him provocative.

Along with his forthrightness and courage Ding brought to his drawing board the supporting virtues of humor, tolerance and perspective.

His satire could be sharp. He could puncture a pompous figure with a few strokes. He could quickly ridicule a silly idea. But he rarely drew in anger. He once said that he had made it a practice to stay away from the drawing board when he was angry.

Justice Oliver Wendell Holmes once wrote, "It is required of a man that he should take part in the actions and passions of his time, at the peril of being judged not to have lived."

No journalist has more vigorously, skillfully and joyously taken part in the actions and passions of his time than Jay Darling.

Above everything else, Ding had a wonderful zest for living, a love for people, a delight with the world. It was characteristic of him that he could not think of leaving without a final, warm goodbye which we print in his old place on the front page this morning.

It is never possible to measure the influence of an articulate man who speaks his views forcefully, and we will never be able to measure the influence of Jay Darling. All we know is that because of him millions of people have looked at the problems of our times from a fresh point of view, with a sharper perspective, a new insight. And we know that influence of this type does not stop when today's paper is discarded. It goes on and on subtly into the future, its origin perhaps forgotten but its force forever effective.—*Reprinted courtesy of the Des Moines Register.*

Among the flocks in the air will be small groups of white-fronted geese and an occasional V of America's largest goose, the Canada.

The white-fronts are distinguished from the blues and snows by their laughing call, slender build and stiff-necked flying manner although the size is similar.

The bomber-like Canadas are larger than their cousins, with sedate flight, glistening black necks and broad wings. This most important of the North American geese is headed for its northern North American breeding grounds, often arriving in Iowa the first part of March.

This is the only goose known to breed in Iowa. Cultivation and

drainage of its old haunts have caused it to move on to more suitable areas. The wary, cautious bird is common on both rivers and inland areas remaining in well-secluded areas as long as there is food and open water available.

Through the goose flight are seen small groups of ducks darting with rapid wing beats and interrupted flight. They look like dwarfs compared with the geese.

To see the birds in their spring courtship regalia and mating plumage, to hear them actively calling to attract mates and to thrill to the magnitude of nature's wild creatures performing their centuries old migratory task without regard for the bustle of civilization is a never-to-be-forgotten experience.

HT—

(Continued from page 17)

be clothed in mystery. For years the blue and snow geese disappeared into the arctic and their breeding grounds remained unknown.

Only during the last few years have the long pilgrimages of these birds and their flights been charted to the wintering grounds on the Gulf coasts of Louisiana and Texas to the breeding grounds on the arctic tundra of Baffin Island, where winter winds and grinding ice greet them on their arrival in mid-June.

The secret igniting the spark which tells the birds "spring is approaching, it's time to move northward," has long baffled man. Nature's secret is well-kept. The mystery of the great migration stimulates man's imagination as it has done since his beginning.

In mid-February, while ice remains on the ponds and streams and snow still covers the hills along the western Iowa border, the air becomes filled with restlessness around the warm coastal marshes of Louisiana and Texas. The birds start to congregate in the warm southern sun of their wintering grounds.

Anxious are they to move northward that the first flocks follow on the heels of retreating winter and are often forced back temporarily by severe weather.

The Flight in Iowa

The leisurely flight usually lasts from two to four weeks in Iowa. Areas

where the birds are feeding will be inhabited for several days before moving northward. The first stop-over is usually on the bottom lands west of Hamburg. Shortly afterward, they move near Percival or to Forney Lake. Then they next appear at Kellogg's Slough south of Glenwood. From here they move on to Green and Manawa bottoms south of Council Bluffs. Some continue to Honey Creek Lake and Noble's Lake.

The next large concentration is seen near the Onawa-Turin area or around Grant Center. The last concentration occurs in the Hornick-Lutin area south of Sioux City.

Although the largest concentration is found in western Iowa, any body of water will hold its quota. The Mississippi River bottoms, inland to the Riverton Area, Odessa, Conesville, Bays Branch, Browns Slough, Colyn, Des Moines Reservoir, Sweet and Big Marshes and Lakin Slough usually offer good concentrations of ducks and geese.

These areas are easily accessible by hard-surfaced roads and in most places it's possible to watch the geese from the highway. Sticky black soil in these areas makes unsurfaced roads almost impassable, so stick to hard-surfaced roads. Information regarding the flights, location of concentrations and the best route to follow can be obtained through the Conservation Commission or the local conservation officer in the vicinity.

SELECTING YOUR HANDGUN

Jack Kirstein

Rapidly increasing in popularity, handgunning fills the need of the sportsman in many ways. The decided disadvantage of carrying a short-barreled, hard-to-shoot firearm is more than made up for by that exhilarating feeling when you bring home your first bushy-tail or long-eared speedster and proudly state, "I got 'im with a pistol."

Of prime importance is the choice of type, kind, size, and caliber of your sidearm. To get the most out of the sport, it is important that you are equipped with a weapon that fits your hand well, is accurate, doesn't cost so much to shoot that you neglect the all-important practice, and above all is safe.

The various guns available fit different hands in different ways. The best method of choosing is to revert to the old time-worn gimmick of putting the gun in your hand, selecting a target mentally, close your eyes and point the gun.

If the fit is good, you should be nearly on target when you open your eyes. Another test is to take the gun in hand, look in another direction and after getting what feels to you like a comfortable grip, look back to see if the barrel forms a straight line with your forearm. This will permit you to improve your accuracy by a large percentage. Should the barrel line fall to one side or another, it will be necessary for you to turn your fist in pointing the gun causing a strain on your forearm muscles.

This, coupled with the kick of the gun in recoil will send your shots where you don't want them to go.

Most American-made handguns can be counted on for accuracy as well as having some kind of sight adjustment to change when they are not. Generally, the better guns provide some means of adjusting for both windage and elevation. This may be in the form of a sliding sight cut into a slot in the barrel or frame itself, adjusted by tapping lightly with a hammer. This kind of sight adjustment dates back to the early frontier days when a single action Colt cost \$18, of this, \$17.50 was for the gun and the other 50 cents was for the hammer to adjust the sights.

Many high grade guns offer easily adjustable front and rear sights, and if you want to become especially proficient in handgun shooting, these guns will be well worth the extra money they cost. Their adjustment is usually by means of small set-screws in the sights themselves.

What Caliber?

Economy comes in many forms. In considering caliber, economy spells only one thing, the spunky little .22 caliber rimfire. Easily the most available handgun fodder, the .22 permits the beginner to practice to his heart's content at nominal expenditure. This is only one facet of the .22; it is also the ammunition least likely to blow your fur or feathered trophy into an unrecognizable mess. We suggest



The automatic is a fine range gun, but it demands careful handling since it loads automatically. A good handgun will add a lot to your outdoor recreation all year-round.

that the .22 is the best all-around target, hunting, and plinking choice in a pistol.

The main difference in the accuracy of a rifle over a handgun is the fact that the rifle barrel is longer. This in itself does not improve the accuracy, but since the front sight is necessarily on the front of the barrel and the rear sight on the rear, it means that the sights are farther apart and therefore easier to align without error. Elementary as this may sound, many beginners forget this in choosing a handgun. The longer the barrel on your pistol, and the farther apart the sights are on that barrel, the better your chances of hitting the target, be it live or simulated.

Automatic

The automatic weapon usually provides more shots per loading. It takes less strength in the trigger to operate. Loading is done beforehand in the use of extra clips. This means that in a couple of seconds you can take out the empty and insert the fully loaded clip. If you plan to take up formal target shooting, it is almost a must. Rapid fire and timed fire is easier with an automatic as it is always ready with another shot after firing giving you the extra split second to do your sighting rather than pulling a cylinder around into alignment with a little extra force, which may throw your front sight a little off target.

This may make you think that the automatic is the ideal gun. In some instances it is. However, the automatic is not a gun for you if you have a heavy trigger finger. Since it unloads and loads itself without help from you, it is at all times ready to fire with only the slightest pressure on the trigger. Automatics are only safe when the

safety is on, and not always then.

In general, automatics do not jam easily. Jamming is not something that is or is not built into a gun. Complicated in construction, the automatic will not forgive sloppy care. They must be kept clean, and many gunsmiths get rich "unjammings" automatics with nothing more than a clean rag and a little cleaning solvent.

Revolver

The high-rated revolver enjoys a great deal of popularity. Ranging in its capacity from five to nine shots at a loading, and being almost indifferent to a reasonable amount of dirt in its action, it still provides the biggest portion of pleasure to the biggest portion of handgunners.

From the safety angle, the slower loading of the cylinder, the necessity of cocking or "extra-pulling" of the trigger to align a loaded chamber with the barrel for firing, and the carrying of the gun with an empty chamber under the hammer all add up to a long pleasurable life for the owner, not to mention his friends and companions.

With the advent of rebounding hammers many years ago, the revolver has become practically immune to accidental firings. Even so it should always be treated with the respect due any gun.

Accuracy is kept longer in revolvers than in automatics of the same quality due to the fact that the sights are mounted on the frame of the revolver, instead of on a moving slide as is the case with automatics, which in time wear down and get loose causing slight misalignment of the sights.

Either type of gun, revolver or automatic, can be for you. With a bit of study and practice you can become a handgun shooter.



The single-action revolver is a good all-around field gun. A long barrel will provide greater accuracy than short ones. Rabbits and squirrels are good targets for a pistol.

A MAN-MADE BOOST FOR DUCKS

Denny Rehder

The extreme drouths of 1959 and 1960 have posed additional problems for our dwindling duck populations. The pothole country of southern Canada which furnishes the bulk of our ducks has been hard hit.

Such a situation forces the ducks to move into marginal areas less desirable than their favorite nesting sites. Iowa is one of these marginal areas.

One time Iowa was a major producer of ducks, but the advent of the drainage ditch and the tile lines has taken most of the little potholes away. In northwest Iowa we still have some of the original pothole country under state management. We have also tried to reclaim marsh land that has been drained, and have built marshes in areas where they were needed.

Now we are trying to raise the numbers of Iowa-produced ducks, knowing full well that our efforts will be only a drop in the bucket compared with the production of the Dakotas, Minnesota, and southern Canada.

Essentially, the following species nest in Iowa to some degree: mallard, pintail, wood duck, redhead, blue-wing teal, ruddy duck, and coot. We are making efforts to encourage more nesting by studying their nesting habits.

One of the newest innovations in this continuous study is an experiment using nesting boxes to attract mallards. Artificial nests for wood ducks are old hat, but new for other waterfowl are relatively new.

Two areas are being furnished with these nesting boxes—the Bays Branch Unit northwest of Des Moines and the Ingham-High Unit in the Iowa Great Lakes



This is probably the most popular style of predator-proof nest. Placed in about two feet of water, it offers a safe nesting site for mallards and insulation from the sun.

Jack Kirstein Photo.

region. The Bays Branch Unit is Ingham-High Unit is a part of the original prairie pothole country still existing within the state.

The Conservation Commission hopes to find out if we can provide artificial nesting sites for mallards that will be used. Mallards are receiving the emphasis in this experiment because they nest on the shoreline, along with pintails and blue-wing teal, and have little protection from predators. Predation from skunks is the biggest problem of these shoreline nesters.

In order to hold predation down on these species, the Commission is

a game management area of man-made and reclaimed marshes. The trying artificial nests placed over the water.

Last year at Bays Branch a delay in receiving materials for the boxes made it impossible to get them over the water in time for use. The boxes have to be out as soon as the ice is gone.

At Goose Lake, a part of the Bays Branch Unit, baskets of woven wire and nesting material were placed in trees standing in water. Four of these baskets were used but there was no evidence of successful nesting.

It is difficult to find nests that are being used unless you scare up a hen. However, nests that have been destroyed are easier to spot, making it hard to get an actual picture of the overall nesting situation on an area.

The cylindrical nests are predator-proof when placed on poles standing in the water. This is an important feature, since 90 per cent of the duck nests in Iowa are destroyed by high water or predation.

In the Ingham-High Unit baskets were used at Buffalo Creek but we have no record of their success. It was found that the mallards seemed to prefer the baskets to nesting on the shoreline, and the baskets provided protection from skunks.

As the artificial nests are put out this spring, Commission personnel will be keeping a close check on their use. If such an experiment should prove successful, the losses from predation will decline, while the numbers of Iowa's home-grown ducks will increase.



Jack Kirstein Photo.

Located at the Ingham-High Unit, these basket nests appeal to mallards. They offer protection from skunk predation.

POWERS REVIEWS 1961

Excerpts from a brief review of current projects and activities of the various Sections within the Conservation Commission, by Glen G. Powers, Director.

"The Biology Section is basically a research group whose projects include: state-wide population and distribution studies for Fish and Game; life history studies; habitat studies; harvest inventories; property management studies; cooperative surveys; cooperative weed and algae control; recommendations to the Director and the Staff of the Commission for management.

"One project that is bound to be a popular one is the stocking of pheasants in southeast Iowa. Here we have never had pheasants before and we felt that it was worth a try. If successful, such stocking would add much to the hunting recreation for this section of the state.

"Our biologists are responsible for the compilation of the Waterfowl Hunter Success reports submitted by all of our Conservation Officers and are continuing the age and sex ratio studies of waterfowl harvested in the 1961 season. While we had a very successful waterfowl season in Iowa, this 1:1 ratio of old ducks to young killed can mean only one thing, and that is that we are cutting seriously into the adult population and that the young duck population is seriously down.

"Our Superintendent of Federal Aid reports that since the beginning of the Federal Aid Program several years ago we have acquired from Pittman-Robertson funds some 22,963 acres of land at a cost of \$1,575,595.00; with Dingall-Johnson funds a total of 2,383 acres at a cost of \$175,234.00; and from a combination of these two funds we have acquired a total of 5,077 acres at a cost of \$525,856.00. To date the total acquisition from these funds is 30,423 acres at a cost of \$2,276,685.00. In 1961 the total cost of the development projects approved was \$528,980.00. 75 per cent of this amount was supplies by the Federal Government and 25 per cent by the state Fish and Game fund. Currently we have 11 acquisition projects underway from the Fish and Game funds and 2 from D-J funds.

"The state-wide story on Fisheries was generally good for 1961. Lake water levels and stream flows were the highest in recent years. Special efforts were expended to keep carp from reconnected marshes adjacent to natural lakes and to stock desirable brood game fish in these natural nurseries.

"In Clayton County the Big Springs Trout Hatchery which includes a 10,000 gallon per minute cold water spring and 24 rearing ponds was acquired in 1961. Fish and Game personnel feel that this

(Continued on page 24)



Jack Kirstein Photo.

This is typical of those to be used at the Bays Branch Unit. It will be covered with straw to provide insulation.

DUCK AND SHORE BIRD MIGRATION

Carol Buckmann

It's March and the snow and ice are beginning to retreat. This means three things to a duck or shore bird—move north, pick a mate and settle down with a family.

The waterfowl migration starts in March, continuing through April, while the shore birds, on their flight from South America, prefer to make their Iowa appearance in warmer weather, arriving from April to May.

In their order of appearance, the anxious pintail leads the procession. Although most of the ducks prefer March and April to make their Iowa debut, February is spring to a pintail. Among the earliest to migrate, they move in from their wintering grounds as soon as the ice begins to break. The height of the flight comes in March with a few stragglers still seen in April.

Pintails nest from the northern portion of the central states northward, making almost a circum-polar breeder with one of the widest breeding ranges of the duck family. One of the commonest spring migrants, they occasionally nest in northern Iowa, sometimes remaining here throughout the winter.

While the pintails are traversing the marshes and fields, the American mergansers are moving into the main bodies of water. (They can show up anywhere depending on the retreat of ice on smaller lakes and streams.) They winter in California, Louisiana and Florida but are seen in Iowa as long as there is water and sufficient food. The largest part of the migration is in March.

Mallards join the pintail the second week of March. By this time, they are paired and often fly with black ducks and pintails.

Mallards winter in practically all of North America south of Canada where there is suitable habitat, needing only an ample supply of food and water.

Mallards are joined by baldpates, gadwalls, redheads and diving ducks in the second week of March. The gadwall doesn't often arrive before the middle of March with the greater portion coming in late March and running to mid-April.

The greatest abundance of gadwalls is seen in the northern lakes region where they occasionally nest. Their cosmopolitan distribution probably makes them the most widely distributed duck.

Like the gadwall, the baldpates seldom appear before mid-March. Their flight lasts until around the first of April. Redheads and other early diving ducks, begin arriving as soon as the ice breaks, with the main flight coming through Iowa in late March to April 1.

Canvasbacks are found in groups of their own species, but in migration mingle with flocks of scaup, ringnecked and redheads. This fairly common migrant is most numerous on deep lakes well supplied with aquatic vegetation.

The lesser scaup, found on larger lakes, rivers, small ponds and marshes, is the most common diving duck in Iowa. April is the height of their flight but often they are here in March, staying as late as May. A few remain through the summer.

Congregating on the first open water of larger lakes and rivers are the common goldeneyes. Occasionally lingering until mid-April, they are among the last to leave in the fall, staying as long as there is open water and food.

Wood ducks are found in small creeks, rivers, willow-studded inlands and wooded clumps in marshlands. In mid-March, they arrive



Least Bittern.

George Tover



Red-backed Sandpiper.

Jim Sherman Photo.

from Central Missouri and southern Illinois, still being seen in late April. They nest along suitable streams and ponds throughout Iowa.

The waterfowl procession is nearly ended when the shovellers pass through, followed by the blue-winged teal. Found in the marshlands, small ponds and sloughs, the main flight of shovellers is from the first to the tenth of April, seldom arriving before the middle of March. A common migrant, the shovellers sometimes nest in small numbers in northern counties.

The caboose to the waterfowl procession is the blue-winged teal. Although a few may be seen as early as mid-March, they usually arrive after the first of April, with the height arriving around the 15th or 20th. Iowa's most common nesting species, the blue-wings are the last to migrate in the spring and the first to return in the fall. Any suitable blue-wing habitat, such as marshes, rivers, creeks, roadside ponds or even puddles may harbor this late migrant.

Shore Birds

From their warm South American winter homes come the shore birds on their way to the barren arctic during April to the first or

15th of May. Most of them found on shallow bodies of water, mud flats and flooded fields, plovers, sandpipers and dowitchers. Standing water or drained marsh areas where they can dig for insects.

Among the most common shore birds are the lesser yellow plover, sandpipers and dowitchers. Shore birds remaining in Iowa nest include the spotted sandpiper, killdeer, and upland plover.

The lesser yellowlegs is commonly seen from April to May, peering in small groups of ten to fifteen. They prefer shallow wet plowed fields, rain pools, wet grassy areas where they dig their prey out of the water from the surface.

The Wilson phalarope stops in Iowa in May on the way to North. They swim in groups of 20 to 30, circling in a swim motion to stir up insects and animal life from the lake bottom. This is one case in bird life where the female is brighter than male.

In April, the black-bellied golden plovers arrive. Golden plovers have the longest flight of the shore birds. Coming from Argentine wintering grounds, golden plovers swarm up the Mississippi.

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OAK-HICKORY TIMBER TYPES

John Stokes
Assistant State Forester

This is the second in a series of articles dealing with Iowa's major timber types. In last month's article the elm-ash-cottonwood type, often called the lowland hardwoods, was discussed.

Looking ahead, this article will deal with the oak-hickory type which is usually found on the dry upland sites. This timber type varies greatly in species composition. White oak, northern red oak and hickory are the three most common species in this type. The oak-hickory timber type accounts for 40 per cent of the commercial forest land in Iowa. Of the 1,036,000 acres in this timber type the greatest concentration is in the southeastern part of Iowa where some 567 thousand acres are classed as oak-hickory. The northern and western parts of Iowa have 364 and 105 thousand acres, respectively. The stands of trees in southeastern Iowa classed as oak-hickory contain primarily medium-sized trees (that is, trees from 5 to 11 inches in diameter at breast height), while stands in northeastern Iowa generally contain trees with larger diameters classed as sawtimber. Oak-hickory timber stands containing various species mixtures are common in all forested areas of Iowa. Growth on the oak-hickory sites varies greatly from site to site. Considering oak, because of its commercial importance, we have unmanaged stands average 75 to 150 board feet of growth per acre per year. Studies have shown, however, that after a first cut under good management practices the growth rate will increase to one-half. Under continuous managed cutting periods the growth rate has reached 300 feet per acre per year. This has been accomplished by putting the forest on good quality, fast-growing trees.

Grazing a Serious Problem

Decreases in growth result from many factors such as wild fire, insects, and insects. Perhaps no single factor reduces growth in the oak-hickory timber type more than does grazing by livestock. One per cent of all forest land in Iowa is heavily grazed to such an extent that young trees are not present in sufficient numbers to regenerate the timber stand in continuous production. 80 per cent of forest land is grazed to some extent. While the area will regenerate in timber the stocking and growth of trees are adversely affected by grazing and the resulting losses in growth from these causes are enormous in the state as a whole. Grazing causes damage to young trees because due to a lack of adequate forage the animals browse on the leaves and stems of young trees. The soil is

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No grazing here! This ungrazed oak-hickory stand has a good undergrowth of young trees and will provide a steady periodic income to the man using sound management techniques.

George Tovey Photo.

DUCKS—

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flyway to the arctic breeding grounds. When the young are able to care for themselves, the adults head for the coast of Labrador where they grow fat preparing for their flight back to Argentina. They fly down the Atlantic coast back to South America while the young use the Mississippi flyway and must find their own way back to the Argentine grasslands.

Upland plovers are found in Iowa in flat level grassy areas. They fly low over the meadows, giving a whining, eerie call. Their erratic migration sometimes finds them nesting here, becoming abundant at times and rare at others.

There are a number of large, rare birds occasionally migrating through Iowa. Among them are the American avocet and Hudsonian godwit, western willet and long-billed curlew. These large birds are never very common as they head for their Canadian nesting grounds.

Pelicans and cormorants have a spectacular migratory flight in April and May. Sometimes on Little Wall Lake three to five thousand alight, but the pelican flight is headlined along the Missouri River. Cormorants follow the Mississippi River.

The courtship flight of waterfowl and shore birds is the highlight of the season to those who love the out-of-doors.

Coyotes are likely to give wide berth to a large dog, but will sometimes fight and chase a small one.

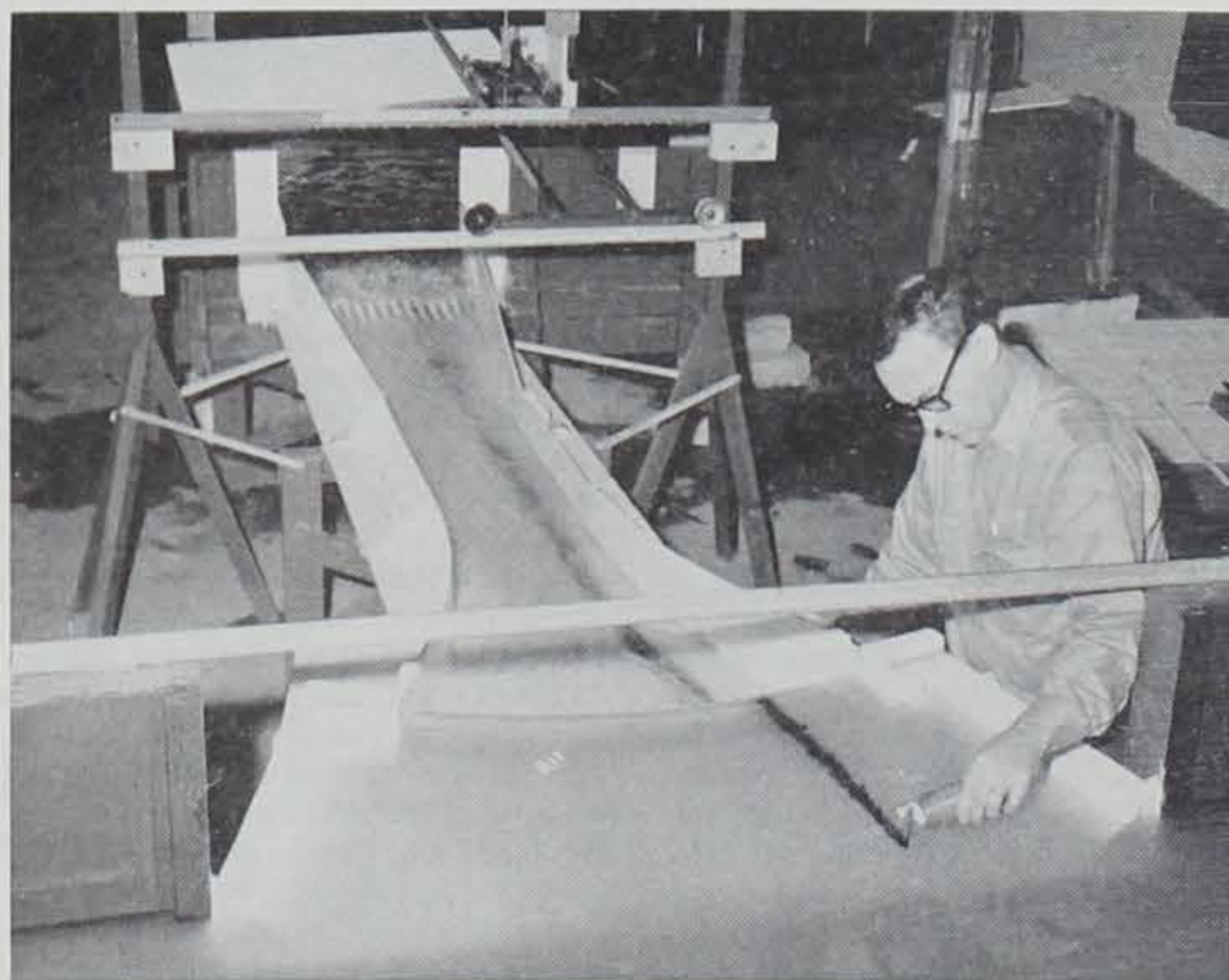
The coyote is strictly an American mammal, and in fact might well be termed strictly North American since so far as is known it occurs nowhere south of Costa

Birds are able to sleep in perching positions without tumbling off a twig because of the way their toe grip automatically locks.

Unusual in bird life, the female phalarope is larger than the male, has brighter plumage and takes the initiative in courtship proceedings. The male builds the nest, incubates the eggs and looks after the young.

The Chesterfield of birds is the great blue heron. To his middle claw is attached a small comb, with which to preen his feathers.

The Arctic tern spends the northern summer in the Arctic and the southern summer in the Antarctic.



Jack Kirstein Photo.

Dye is used to test water flow. Models are a great aid in the design of new spillways.

FROM MODEL TO DAMSITE

In order to cope with the problems of outdated spillways, the Commission's engineers build models to study water flow and behavior as it appears at the actual site.

A recent study has been underway for a new spillway at Lake Ahquabi. Such replacements are necessary at several damsites around the state because they have outlived their usefulness. Many of these spillways were built in the mid-30's and since that time water has gotten under the spillway, washing out dirt and making the structure unstable.

Engineers test water flow over and through a model built on a 1:30 scale. Water flow is figured for the model by formula so that it can be correlated with water flow at the actual site. Dyes are then used in the model to follow the flow pattern of the water.

Spillways are designed to handle water in excess of the desired crest elevation. A wier in the spillway acts as a dam holding water back until it reaches a certain level. The water then spills over the wier, flowing down a long chute to a stilling basin. A stilling basin must slow the water down and release it into the valley at an acceptable velocity.

Concrete blocks are used for the water to hit and lose its momentum. Beyond the blocks is a cushion of water that further slows it down and takes away some of its force.

If the water were not impeded in its flow through the spillway, its turbulence upon reaching the end of the chute would cause it to dig into the earth underneath the chute, damaging the function of the spillway and eroding the valley into which it flows.

The engineers can use the information gained from the model study to determine the design of their wiers and spillways.

OAK-HICKORY—

(Continued from page 23)

compacted by repeated grazing, causing root damage and rapid water run-off. Foresters generally encourage landowners to improve their existing pastures. Cattle require from $\frac{3}{4}$ to $1\frac{1}{4}$ acres of improved pasture while the same animals require from $4\frac{1}{2}$ to 9 acres of average dense wooded pasture. Livestock raising is important on Iowa farms and through better land use it has been possible to have both better pastures and good timberland producing products for Iowa industries.

The oak-hickory type contains many of the most important commercial tree species in Iowa. The red and white oaks make up 45 per cent of all timber cut in Iowa. The sugar maple, basswood, elm, ash, butternut and black walnut are other species finding ready markets in Iowa. Unfortunately hickory, which makes up 8 per cent of the board foot volume in the oak-hickory type, does not find ready markets in Iowa. It finds limited use as rough lumber and in manufacture of pallets.

Due to continuing research the outlook for all species looks hopeful. More and more paper is being produced each year from hardwood timber types. New and economically profitable methods of pulping hardwoods are being developed.

Oak is king of Iowa's forest. About two-thirds of Iowa's timber harvest is used for the production of lumber and railroad cross ties. About 40 per cent of the total lumber produced in Iowa is oak. Oak is important in production of cross ties and in the veneer industry.

Basswood, ash, butternut, sugar maple and elm are all important lumber species. The veneer industry also uses sugar maple, red elm and basswood. The softer hardwoods such as basswood and ash find markets in box plants and as crating and blocking materials.

What About Black Walnut?

Black walnut is perhaps Iowa's most important and most sought after species. It is found primarily in the elm-ash-cottonwood and oak-hickory timber types. Veneer log buyers search continually for high quality black walnut trees or logs. Frequently they purchase individual trees, in order to obtain one or two prime logs, but most are supplied from regular loggers and sawmill operators. Prices paid for top-quality veneer logs may be much higher than those paid for top quality logs of ordinary species, but top quality is very hard to judge in standing trees.

About 50 per cent of the veneer logs harvested in Iowa are black walnut. Other important veneer species are soft maple 14 per cent, oaks 13 per cent, other 11 per cent, cottonwood 7 per cent, and hard maple 5 per cent. The public frequently hears about the high price black walnut trees bring, but no



The quality of black walnut is difficult to judge on the stump. A tree like this with its straight, unbranched trunk will provide a profitable return to the woodland manager.

POWERS—

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purchase will assure economical trout rearing to keep pace with the anticipated population growth and resulting angling demands. On July 4, 1961, a new law requiring a \$2.00 trout stamp for trout fishermen went into effect.

"In 1961 the Game Section operated and managed 136 state-owned Fish and Game Areas totaling approximately 60,000 acres. Outstanding among the contributions by the Game Section last year was the development of a new wildlife exhibit and game experimental farm near Ledges State Park which will be dedicated this spring.

"Our Gun Safety Program is progressing fairly well here in Iowa. In 1961 we guaranteed 1,134 volunteer instructors, and almost 6,000 students who have taken the four-hour training course. This program depends entirely upon service-minded volunteers serving as instructors without pay. Their only satisfaction is a worthwhile safety program for their community.

"Forestry activity picked up greatly during the year. Outstanding among their accomplishments was the beginning of the development of the Paint Creek

to tree than black walnut. Such defects as excessive branching, sweep, twisted trunk, swells, and other tree varies more from tree open cracks reduce log grade rapidly. The price difference between prime and common black walnut logs can be several hundred dollars.

Present veneer markets are seasonally strong. Many black walnut logs are being marketed for export to foreign countries.

Because of the complex species composition found in the oak-hickory timber type it is well for the average woodland owner to request the free assistance offered by the commission foresters. They will give assistance to landowners with timber management and marketing problems.

Unit of the Yellow River Forest in Allamakee County. On this area, in cooperation with the Fish and Game Section, we are developing what I think will be one of the outstanding recreational areas in the middle west. This is the forest area in which we carried out the original wild turkey stocking and I am happy to report that they are doing very well.

"Our new Waters Section finally got off the ground in 1961. Iowa's new Boat Registration and Navigation Regulations and the Water Safety legislation were passed by the 59th General Assembly. Boat registration this past year has numbered approximately 22,000. We anticipate that approximately 20,000 boats now numbered by the U. S. Coast Guard will be registered for the first time this year under the Iowa system.

"The activities of the various County Conservation Boards in 62 counties were still on the upward trend. In the past year 85 land acquisition projects, 45 general development plans and 8 management agreements were approved for County Boards by the Commission.

"Our Land Acquisition Section continued our battle on the Missouri River throughout the year 1961. Many surveys on the boundary of Iowa-Nebraska were completed and the title cleared on the land to the extent that we now have some development underway to provide better access to the Missouri River.

"In Public Relations, the Traveling Wildlife Exhibit showed to well over two million people in the field. Exhibits were presented at the Des Moines Register and Tribune Sports and Vacation Show and also at the Omaha Sports Show. An estimated 425,000 viewed our State Fair Exhibit. We completed a new movie called "Iowa's Hunting Heritage" and started its circulation in 1961. I might mention that this particular film had almost constant booking throughout the year. We are most happy to tell you, too, at this time that our

REECE'S WILDLIFE PAINTINGS ON EXHIBIT

Painting by Maynard Reece, nationally known wildlife artist, will be on exhibit during National Wildlife Week, beginning March 14 and continuing through the 24th, in the East Portrait Gallery, second floor of the Historical Building in Des Moines.

The building, at East 12th and Grand Avenue, will be open to the public from 8 a.m. to 4 p.m.

Reece has won several national honors for his work. In 1948, 1951 and 1959, he submitted paintings to the annual duck stamp contest in which competition is open to all artists, professional and amateur. He is the only artist to have three consecutive paintings selected for use on the duck stamp.

In 1948, his painting of the bufflehead won the national award. In 1951, the gadwall and 1959, his King Buck, a Labrador, won the award.

Last year, Reece won the Roy Award presented by the Izaak Walton League of America for outstanding work in wildlife illustration. The work of this widely recognized wildlife artist has appeared in several magazines including *Successful Farming*, *Better Homes and Gardens*, *Sports Afield* and *Midland Schools*, as well as the *Des Moines Sunday Register* for several years.

Reece, who does work mainly for magazines and calendars, did the color illustrations appearing in the *Waterfowl in Iowa* book, published by the Conservation Commission. His color illustrations also grace the pages of the *Iowa Fish and Fishing* book written and distributed by personnel of the Conservation Commission.

Reece, a former staff artist and museum assistant of the State Department of History and Archives has been free-lancing since 1951. He started painting at the age of six. When he was a seventh grader his entry in an art contest at the Iowa State Fair won first place and launched his career.

traveling exhibit is getting a lot of recognition. We have been invited to show at the International at Jackson Hole this next summer and we feel that this is quite a honor for the State of Iowa.

"I hope many of you have noticed that we now have a very active Park Maintenance Program under way. The last session the Legislature appropriated \$650,000.00 for this program and last year we were able to complete about 40 per cent of it completely. Park attendance was up last year approximately 750,000, making total park attendance for the year of around eight million people. Camping activity is still growing and by the middle of the coming season we will have a total of sixteen camp areas in operation. Sixteen of these were completed last year."