

Outdoor Indiana.



DECEMBER 1959

20 CENTS

OUTDOOR INDIANA

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FRONT COVER—Fireplace at Spring Mill Inn.
Ektachrome by Herman Mackey.

BACK COVER—Photo by Jerry Batton.

Vol. III, No. 6

OUTDOOR INDIANA

December, 1959

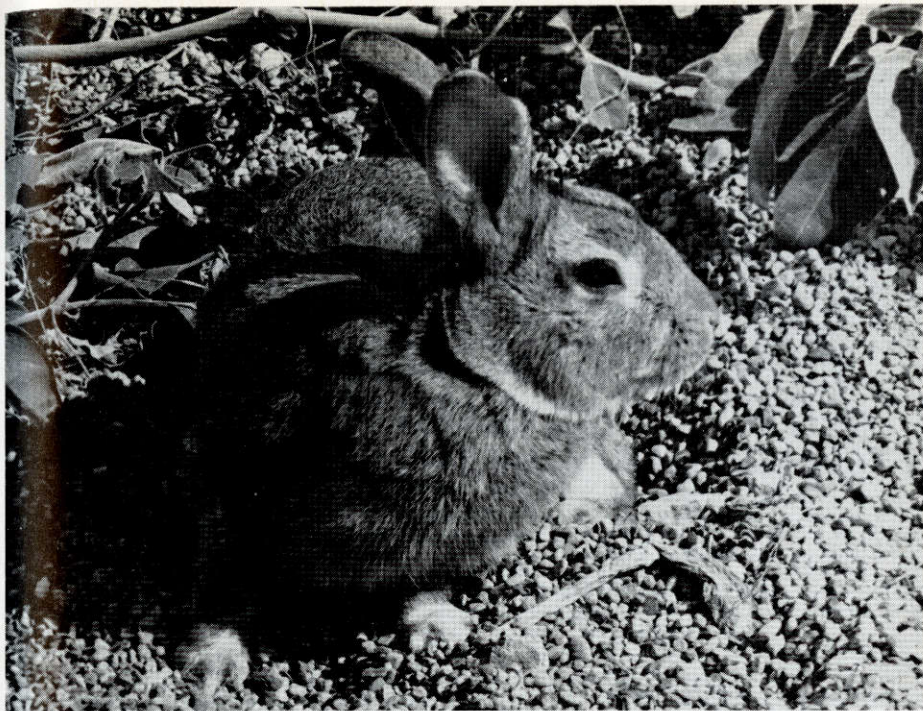
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Published monthly by the Indiana Department of Conservation, 311 W. Washington St., Indianapolis 9.
Subscription price \$1.50 a year. Second-class mail privileges authorized at Indianapolis, Indiana.
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Vernon L. Gay photo

San Juan Rabbit in Indiana

by RALPH D. KIRKPATRICK

Assistant Professor of Biology, Taylor University, Upland, Indiana
Former Research Biologist, Pittman-Robertson Project

"The San Juan rabbit provides nerve-tling sport!" "It is the same pest that ruined Australia!" "It is a hardier rabbit than our Hoosier cottontail!" "It's burrowing will increase soil erosion on Indiana's croplands!" These are samples of the wide range of opinions held by sportsmen, farmers and biologists concerning this large, brown, innocent-appearing rabbit. In order to determine the facts, the Indiana Department of Conservation began the San Juan Rabbit Investigation which extended from August, 1956 to September, 1959.

Sportsmen and conservation officers supplied names of Indiana San Juan rabbit propagators who were then interviewed to determine where and why they obtained the rabbits. A record was made of the number of San Juan rabbits lib-

erated in each county and an examination was made of release sites for the presence of wild San Juans. Tagged San Juans were released on fenced and unfenced study areas in various parts of the state. The writer consulted books and articles written by sportsmen, farmers and biologists who have studied and worked with this rabbit in Great Britain, Australia, New Zealand, California and the San Juan Islands.*

As is the case in many controversies, the truth about the San Juan rabbit in Indiana seems to be that neither extreme of opinion is correct; it is not a valuable substitute for our native cottontail, nor is it ruining the agricultural economy of

*Between Haro and Rosario straits, Washington Sound, forming San Juan county, state of Washington (n.w., U.S.A.).

Indiana. The rabbits usually do not live long after release — but we are getting ahead of our story.

The San Juan rabbit is the same species (*oryctolagus cuniculus*) as the wild rabbit found in Australia, New Zealand, Great Britain, Europe and in various regions of South America and North Africa. It cross breeds with domestic rabbits (*oryctolagus spp.*) but not with our native cottontails (*sylvilagus floridanus*). An adult San Juan weighs about five pounds and is usually brown and sometimes has white feet or a few white hairs on its forehead. Occasionally black or even yellowish San Juans are born. Captive San Juans will breed throughout the year. The number in each litter ranges from one to twelve but averages three or four. A female rabbit may bear several litters in one year. The females dig shallow burrows that may extend twenty feet or more, which are used for shelter and for rearing the young.

Rabbits propagated in Indiana were first imported from the San Juan Islands where they were box-trapped or netted from vehicles at night. Since 1949, when releases were first made in Marion County, at least 6,326 San Juans have been liberated in 50 or more Indiana counties by not less than 155 propagators.

Most propagators are beaglers who feel they need more rabbits on which to run their dogs, having become alarmed at the periodic scarcity of native cottontails. San Juan rabbit propagation, therefore, is one method which has been used in an effort to maintain a sufficient number of rabbits on beagle running grounds.

But San Juan rabbit propagation has failed to solve the problems of Indiana beaglers and rabbit hunters. This rabbit has not become established here because of the type of cover provided. It needs large areas of short cover including stretches of bare ground. Our lush grasslands and dense stands of weeds, brush and timber are not to its liking. Dogs,

domestic cats and great horned owls kill the released rabbits if exposure, disease or cars don't kill them first. They are sometimes able to live for several months in farmers' barnlots because of the protection offered by the farmer and his buildings. Here they can also obtain food in the barns and cribs. They sometimes produce young in a short burrow under a building or board pile. The young are killed by dogs or cats soon after they leave the nest, however.

Although released San Juans have not "taken hold" in Indiana, still they are a menace to our native cottontails and domestic rabbits. A mite and a louse not previously known in Indiana have been found on San Juans held by propagators here. These new rabbit parasites probably were imported with a shipment of San Juans. A virus caused disease, infectious *myxomatosis*, is killing these rabbits in Great Britain, Europe and Australia. This disease is also found in California where it is killing domestic rabbits. Continued importation of San Juan rabbits from the west coast might bring in this disease to the sorrow of Hoosier domestic rabbit raisers and sportsmen.

As a result of this investigation the writer recommends that further importation of San Juan rabbits be prohibited as an aid to keeping new rabbit diseases and parasites out of Indiana. To protect Indiana's wildlife and to save money, propagators of San Juans should be encouraged to stop releasing rabbits. Indiana's rabbit hunters and beaglers should concentrate on developing their hunting areas and running grounds for the maximum production of our native cottontail. Rabbit management biologists have the knowledge and experience necessary to aid Indiana sportsmen to produce more rabbits on the local level without resorting to costly artificial propagation of cottontails or the thrice-costly, ineffective and dangerous propagation of San Juan rabbits. Δ



Information from the boat owner's application for registration is transferred to file cards. Here, Ann DeBaun, who has completed the operational course at IBM training school, demonstrates use of the Key punch machine which records data by means of coded series of perforations in the cards.

Motorboat Registration

by JOHN D. RAWLINS
Superintendent of Enforcement

THE ENFORCEMENT DIVISION of the Indiana Department of Conservation has been busy the past several months making studies to determine the most efficient method of administering the new motorboat registration law. The 1959 session of the Indiana General Assembly enacted Senate Bill 146 which provides that all motorboats having motors of over 6 horsepower must be registered by the owner and that the certificate of registration must be on the vessel at all times when in use. The Act designated

the Conservation Enforcement Division as the administrative body and provided that the registration fee shall be three dollars.

The approved procedure which will be followed is one of expedience and accuracy. Application forms are to be made available to the public this month (December, 1959) at the offices of all county clerks in the state of Indiana, at boat retailers, sporting goods stores and other normal outlets for boating supplies. The boat owner can procure an application



The IBM Electronic Sorter automatically arranges cards in alphabetical or numerical sequence, sorts out cards for statistical use; for example, the number of boats with in-board motors of a given horsepower in a certain area, if such information were needed.

for registration at any of these places. Each application must be filled out in its entirety; all questions must be answered to give information required. The application must be printed clearly or type-written to minimize errors then mailed with a \$3.00 Money Order *only*, to the Enforcement Division, Indiana Department of Conservation, 311 W. Washington St., Indianapolis 9, Ind. No personal checks, cash or certified checks will be accepted.

On receipt each application is processed through three IBM machines in the office of the Enforcement Division expediting the return of the certificate of registration to the owner. The three machine operations can be handled in a minimum of time and the system is so complete that from data gathered a cross filing system is created. Any type of information or statistics can be obtained by running the cards through the machine known as a sorter.

The initial operation employs the IBM Key punch. Manually operated from a keyboard somewhat similar to a typewriter, the machine automatically codes and records by means of punched holes all information from the application on file copy cards used for reference within the department. Cards can be filed alphabetically by name of the owner or numerically by registration number, giving a complete check on who owns any motorboat. From these cards all filing and printing of registrations is automatically processed by the correlated machines' abilities to "read" the punched holes.

The second operation sends the Key-punch cards through the IBM Electronic Sorter which sorts and classifies 650 cards per minute, automatically arranging them in alphabetical or numerical sequence. If it is necessary, for instance, to find out how many 18-foot boats are registered in a particular county, the sorter can be set to pick out this data as the cards are run through. This type of data gathered from 100,000 potential 1960 registrations will enable the division to more efficiently enforce motorboat safety laws in Indiana.

The final machine which will speed your registration certificate to you is the IBM Printer. Its electronic brain reads the information on the Key punch card, translates it into alphabetical and numerical equivalents and automatically prints the certificate of registration. It is capable of handling 25 registrations per minute.

By using these devices the Enforcement Division will be able to process applications, gather full information on crafts and owners, and return certificates of registration in record time.

Personnel from the Enforcement Division sent to IBM school have received full instructional courses in the operation

INDIANA CONSERVATION OFFICERS



Officer Joseph Planck, Enforcement Division central office, checks a test registration from the IBM Printer. The Printer decodes the perforations in the Key punch file card, translates them into legible symbols, and prints the certificates of registration at the rate of 25 per minute.

of the equipment. Use of the machines will relieve the division of long laborious hours of manual filing. Information needed can be acquired in a few minutes; manually, it would take hours. The system is so arranged to provide selected information quickly and efficiently.

The Enforcement Division, in order to relieve a rush for registrations in April, May and June, advises and urges motorboat owners to send in their applications as soon as the forms are available this month.

The certificate will be in effect for three years from date of registration. All Coast Guard issued numbers now in effect will be void in Indiana after Jan-

uary 1, 1960. (If your boat is presently registered with the U. S. Coast Guard, it will be impossible for the State of Indiana to reissue the same number you now have.)

Motorboats having a 6 horsepower motor or less are exempt from the registration law. However, it might be well to point out that if boats in this class are registered there will be a record in the Enforcement Division which would make the boat and motor easier to trace in case of theft.

Details concerning other regulations in connection with this new statute will be forthcoming in the January issue of *Outdoor Indiana*. Δ

Deepest Oil Test Well Drilled

by R. DEE RARICK
Indiana Geological Survey

“ Dry Hole Yields Something ” Deepest pit ever dug in Indiana to give valuable geologic data

THIS WAS ONE OF A NUMBER OF HEADLINES appearing in the newspapers of the state around July first. The deepest test well ever drilled for oil in the history of the state's petroleum industry had just been abandoned and plugged.

Although no oil was found, the deep well provided important new information on the rock strata underlying our state. Scientists from the Indiana Geological Survey were doing research on the well data even before the hole was abandoned. The objective of this research was to reveal secrets hidden in the earth's crust so that prospecting for mineral resources could be made easier. Results of this research will soon be made available to the public at the offices of the Geological Survey located on the campus of Indiana University at Bloomington.

The Indiana Farm Bureau Coop's Luther Brown No. 1 well in eastern Lawrence County was drilled to a record depth of 6,806 feet. Previously, the record for the state was held by a Gibson County well completed in 1947 to a total depth of 6,408 feet.

Originally the Farm Bureau had intended to prospect for oil only to the top of the basement complex, the ancient Precambrian granites, gneisses, and other crystalline rocks that underlie the more than 5,000 feet of sedimentary rocks in Indiana. These basement rocks, estimated to be more than 500 million years old, were expected to be reached at a depth of 5,500 feet below the surface of the ground. In the interest of research, however, the Farm Bureau agreed to coredrill the Precambrian rock as well. Data from the well revealed that the top of the basement complex was encountered at 6,650 feet. At that point the drill-bit penetrated volcanic rock, a dark basalt. The Brown well was the seventh well in the history of the state to reach these ancient rocks.

Choice of the drilling site was based on a recently released Survey publication on the Mt. Carmel Fault, a 50-mile-long fracture in the earth's crust that traverses Monroe, Lawrence, Jackson, and Washington Counties with a north-south trend. The well was drilled on the Denison Dome, one of several domal struc-



Survey geologists Dan Sullivan (left) and Arthur Pinsak examine fragments of rock 500 million years old.

tures occurring along the fault. Many similar structures throughout the world have been found to contain oil.*

Test wells in the region surrounding the new well are sparse. Prior to the drilling of the Farm Bureau well, the area had been test-drilled to a depth of only 2,500 feet. The only development consisted of noncommercial gas in limestones of Devonian age at a depth of approximately 700 feet in the old Leesville Gas Field. Recently, a portion of the old gas field was converted to gas storage by a major gas company. The new well revealed information on rock formations below the 2,500-foot level on which the Geological Survey had no other information for 50 miles.

The cored rock recovered from the bottom of the well has been identified by Survey geologists as spilite, an igneous

rock that may have flowed out on the bottom of an ancient sea or it may have been a molten mass that forced its way up through the Precambrian rocks millions of years ago.

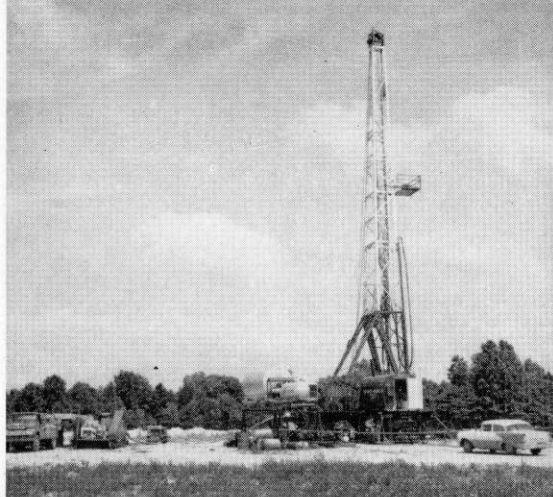
The great demand for petroleum products in recent years has brought about widespread exploration and exploitation of the shallower petroleum-producing zones. The never-ending search for this vital product is forcing oil operators to test deeper reservoirs. This means increased costs of finding new oil deposits.

Although a dry hole means a great disappointment to the investor and local landowners, it provides the geologist a treasure of information. Along with knowledge of subsurface formations obtained from nearby wells and from scientific instruments such as the seismograph, data gleaned from a single well could very well provide the clue that might lead to an untapped oil-bearing structure or a mineral deposit that would greatly affect the economy of the area or even the entire state. Δ

On the next three pages is a pictorial story of modern deep well drilling.

Perhaps not as "romantic" as the outdated Hollywood version where a gusher comes in and the hero, drenched with crude oil, clasps the heretofore defunct rig owner's daughter, (invariably dressed in white) to his manly chest—today's highly scientific methods are nonetheless spectacular!

*See back cover, November, 1959, Outdoor Indiana, "Strata Data".

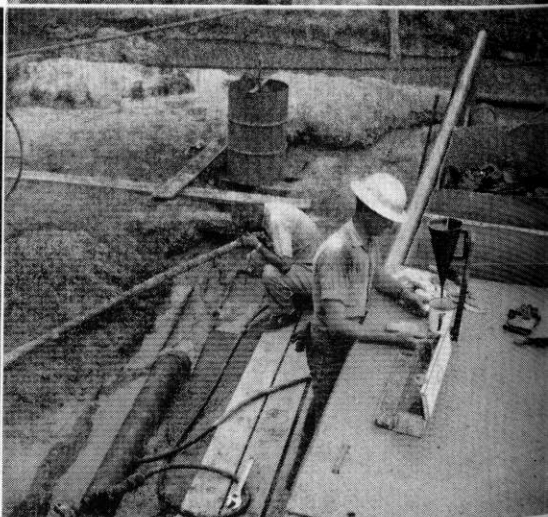
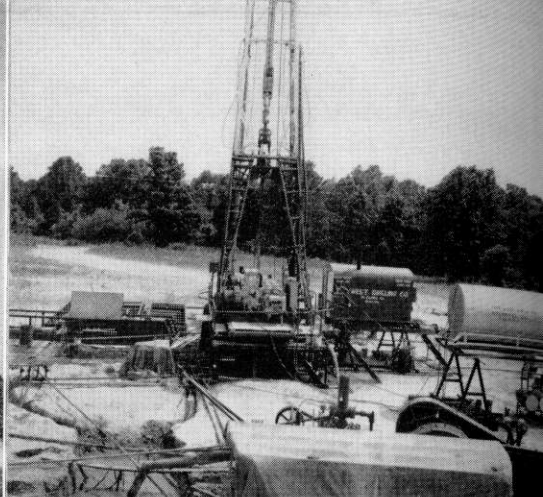


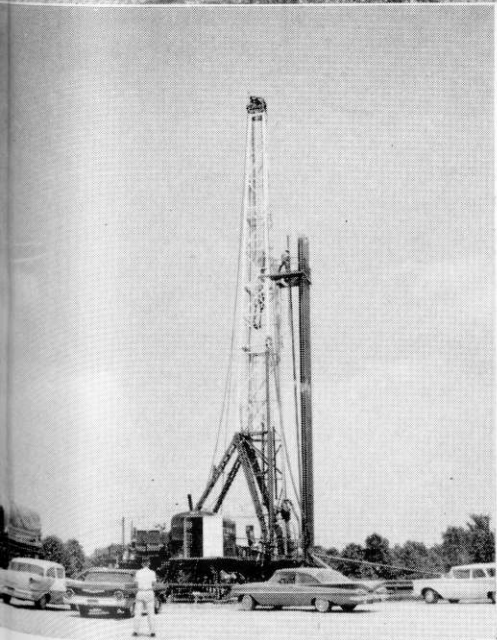
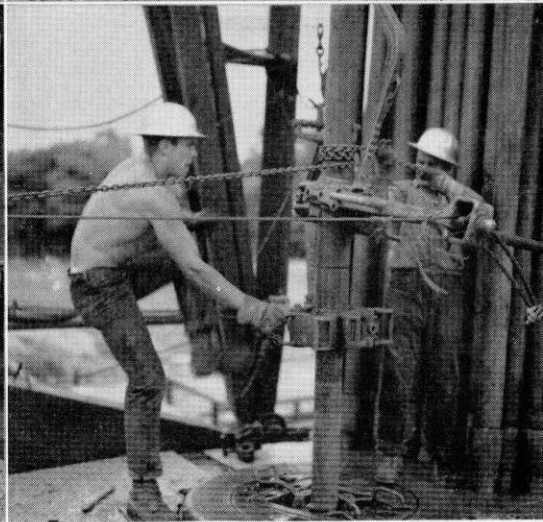
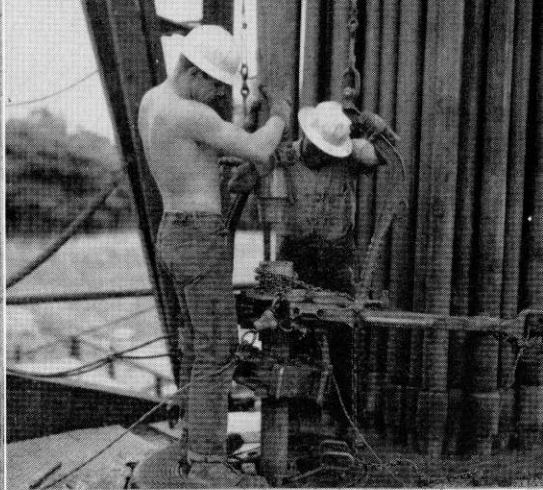
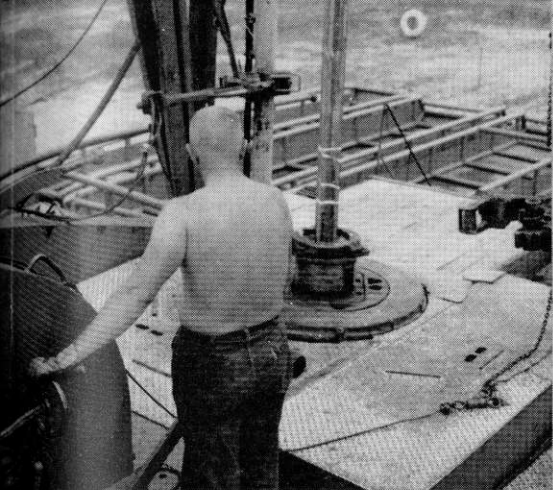
The huge rig (above) grinds into the underlying rock formations around the clock.

Production manager Fay Vancil (below) explains a new rock bit to farm owner Luther Brown.

(Top right) Mud pump in the foreground picks up mud from the slush pits (center). Pumped to the bottom of the hole through the hollow drill pipe, it cools and lubricates the bit, flushes cuttings to the surface.

Mud viscosity is checked frequently (bottom right). Man in back is examining cuttings.





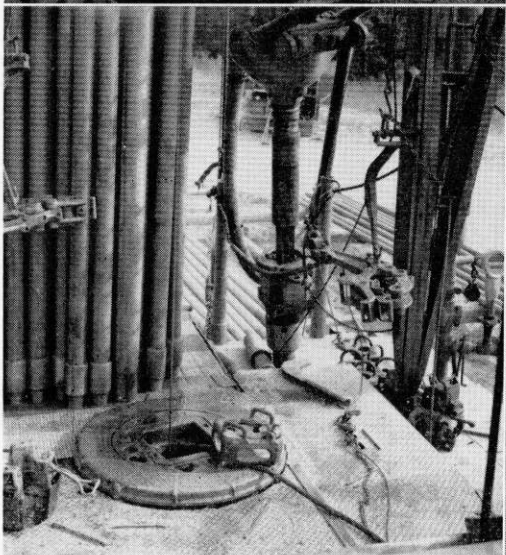
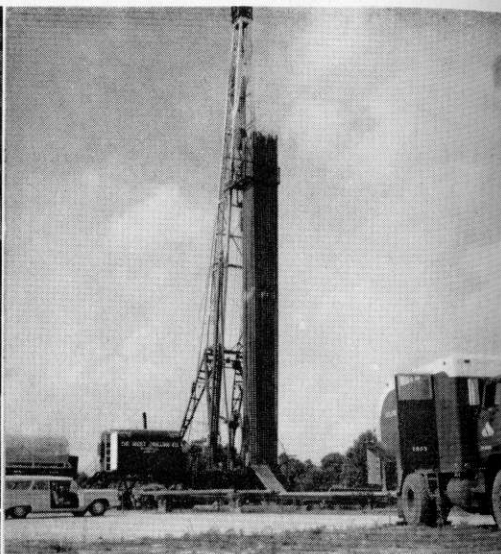
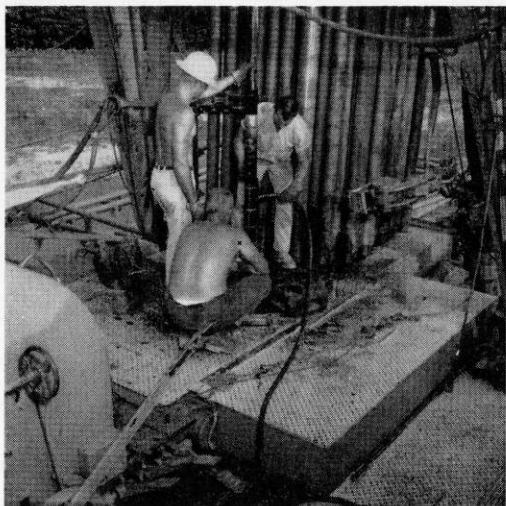
The driller (top left), watching the kelly and the spinning turntable, "feels" the string of tools as the bit grinds away, far below.

The crew is "making a trip" (center left). The string of tools starts back into the hole with new bit attached.

Man on the "monkey board" (left) steadies a stand of drill pipe waiting to snap elevators on. The traveling block lifts the pipe . . .

. . . and the roughnecks "stab" the two ends of pipe together (top right).

Chain and tongs attached to diesel-powered draw-works tighten the two joints and the new stand is lowered into the hole (above).



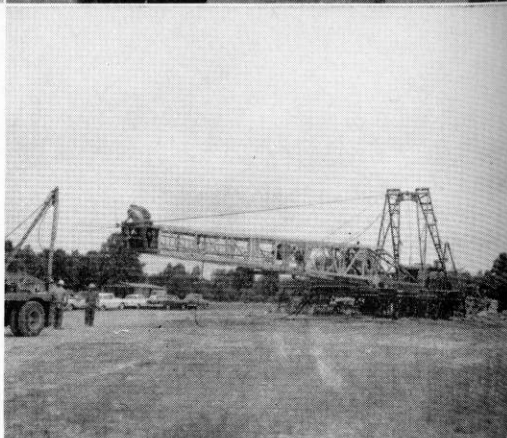
Before the well is completed or plugged it is "logged". Here (top left) a logging sonde is attached . . .

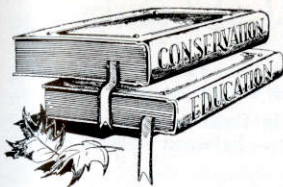
. . . and lowered to the bottom of the hole (above). As the sonde is slowly pulled back to the surface . . .

. . . sensitive instruments in the truck (top right) record on film the electrical properties of the rock.

The logging engineer (right center) shows the electric log negative to Fay Vancil.

The well, found dry, has been plugged and dismantling of the big rig begins.





Animal Tracking

an educational hobby

by WILLIAM COLPITTS
Educational Advisor

AFTER A LIGHT FLURRY OF SNOW you can experience one of the most exciting outdoor activities—tracking wild animals and identifying their tracks. Of course you can also track along the muddy or sandy beach of a lake or stream.

But at first, when you are just learning to track, you will find that a winter morning following a very light snowfall is the easiest time and with continued practice you will soon be able to track on all kinds of ground.

Following are a few tips to aid you in becoming an expert tracker:

1. Study the track of an animal. Look for certain details to remember. If necessary draw a sketch or make a plaster cast of it.
2. If not already familiar to you, it would be helpful to study common species of birds and animals and their habits, areas where they might be found or direction they might travel—all can help you identify tracks.
3. Whenever possible, track toward the sun. Shadows in the tracks will make them appear more clearly.
4. Study the ground beyond each track for signs of the route taken. Bent grass, disturbed stones, soil or plants may indicate its trail. Remember to note land-

marks such as trees, fences and rocks so that you will be sure to find your way back.

Plaster casts are one of the best ways to preserve copies or records of animal tracks and may also be used in mounting collections along with skulls, bones, rocks and minerals, fossils and other items.

Materials needed:

Plaster of Paris (cold)

Clean water

Stick for stirring

Container for mixing (plastic bowl which cleans easily or a clean tin can which can be discarded)

Strips of tin or cardboard about 2 inches wide to hold plaster in place while making the cast

How to make the cast:

1. Select a clear, distinct print in sand or mud.
2. Make a round or square form of tin or cardboard strips, allowing a couple of inches all around the track itself. Taking care not to disturb the track, push the form securely into the ground leaving about an inch above the surface.
3. Stir plaster of Paris into some water to the consistency of thick soup or pancake batter. Pour plaster

(Concluded on page 14)



Animal Track "I. Q." Quiz

MUSKRAT—Found around lakes, ponds, and streams, outstanding is the weaving line left between tracks.

WHITE-TAILED DEER—Found in forested and farming areas. Extreme difference in distance between walking and bounding.

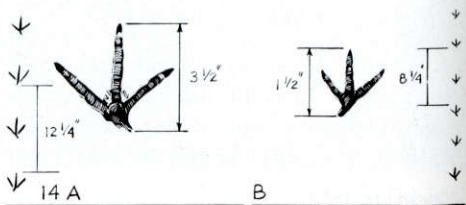
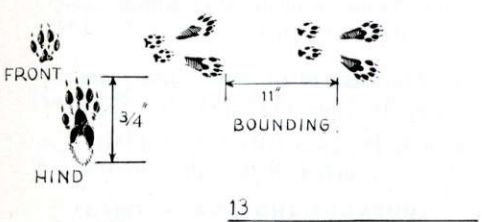
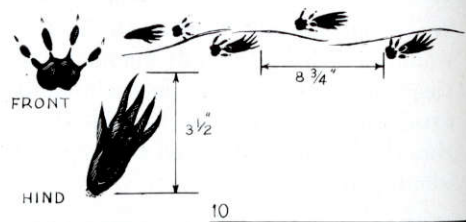
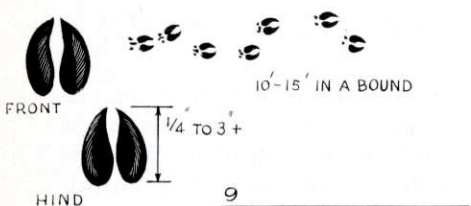
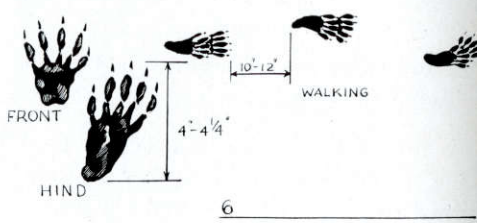
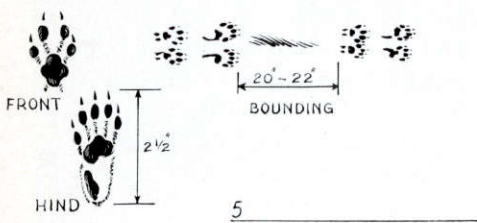
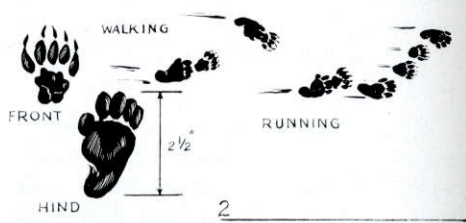
GRAY SQUIRREL—Found practically everywhere, in the city as well as rural. Like rabbit, hind feet show ahead of smaller front feet. Only difference from Fox Squirrel is size.

CHIPMUNK—Found in both urban and rural. Hibernates in winter. Note open angle of hind feet in bounding tracks.

DOG—Found everywhere. Similar to fox but larger, lacking fur between pads, and does not travel in a straight line.

COTTONTAIL RABBIT—Found mostly in rural areas. Hind feet will be found in front of the front feet. After a good cover of snow, is an ideal time to track.

BEAVER—Found near moving water. Large footprint and wide trail of tail make this one easy.



OPOSSUM—Found often near cities with wooded areas. Tracks resemble hands, notice thumb-like hind print, tends to wander, may drag tail.

PHEASANT—Found on farms, woods, marshes and sometimes suburbs of cities. Middle toe straight in comparison to the angled toe and smaller tracks of quail.

QUAIL—Found in rural areas, such as thickets, roadsides, etc. Note angle of hind toe.

MINK—Found near water. May find only three tracks together, and tail marks.

COYOTE—Found occasionally in Indiana in uninhabited forest and open areas. Pads not surrounded by fur and tail marks usually not present. Tends to travel in a straight line.

SKUNK—Found practically everywhere, except dry and dense wooded areas. Hind foot larger and elongated, generally does not show nails.

RED FOX—Found on farms and often in wooded areas. Pads of tracks are generally encircled with fur, and not as large as a dog's. Look for tracks in a straight line with tail marks.

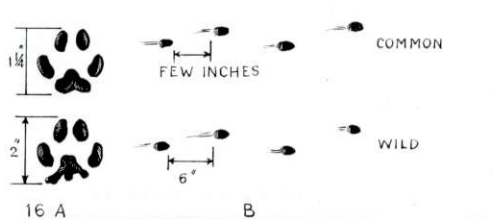
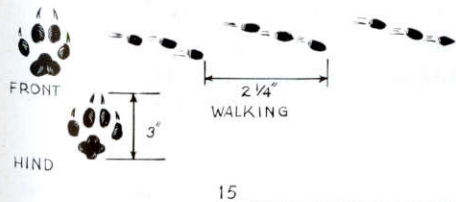
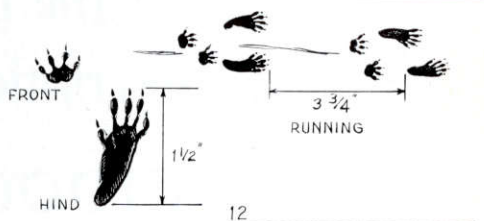
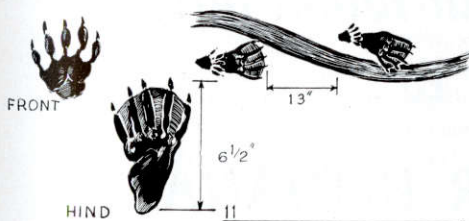
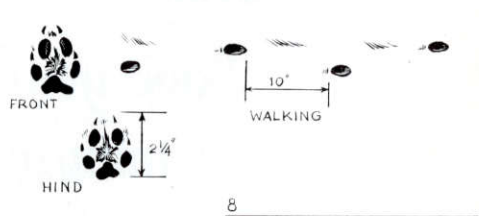
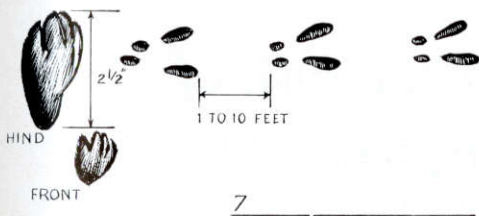
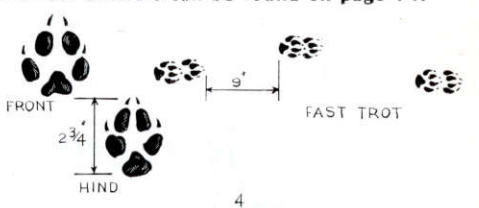
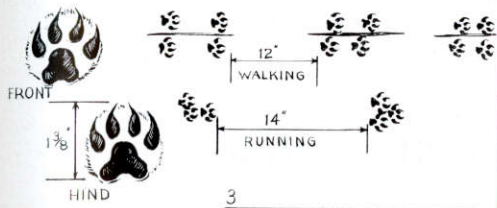
COMMON RAT—Found practically everywhere. Look for much larger hind foot and weaving tail mark.

RACCOON—Found in woods, in fields, around ponds and streams. Tracks look "hand like" with hind foot slightly longer and larger.

COMMON CAT—Found mostly in cities and on farms but all too often in the open country. Tracks vary greatly due to size of cat and consist of four toes and a pad.

BOB-CAT—Very seldom found in Indiana today. Although similar to common cat, the bob-cat's tracks are larger, more widely spaced and have two additional points on rear pad.

The correct answers can be found on page 14.



into the track filling the form. Allow to harden enough to remove carefully, 10 to 15 minutes. (It will take 2 to 3 hours to harden completely.)

4. When hardened, wash the cast in running water. This is a negative of the original track from which a positive, or replica of the track can be made.

5. Coat the negative with vaseline or light oil to keep plaster from sticking.

6. Secure a form of tin or cardboard around the cast as in step 2 then follow the procedure in step 3.

7. If you want to be able to hang your collection like plaques, insert a paper clip or loop of wire, projecting from the plaster, before it dries.

8. You may wish to further finish the replica track by painting it an earth color and labeling it. Δ

Answers to Animal Track Quiz

(turn upside down to read)

1. Opossum 2. Skunk 3. Mink 4. Coyote
5. Gray Squirrel 6. Raccoon 7. Cottontail
Rabbit 8. Red Fox 9. White-Tailed Deer
10. Muskrat 11. Beaver 12. Common Rat
13. Chipmunk 14. (A) Pheasant (B) Quail
15. Dog 16. (A) Common Cat (B) Bob-Cat

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forgotten?*

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*Send the year-round gift,
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OUTDOOR INDIANA

A handy, postage-paid gift subscription form follows page 16.

Farm Habitat Restoration

NEW SIMPLIFIED PROGRAM

by HERALD A. DEMAREE
Habitat Biologist

AFTER EIGHTEEN YEARS of habitat development and research the Wildlife Restoration Project, under the Division of Fish and Game, announces the modification of its program to better meet the needs of our wildlife.

The new program, known as the *Farm Habitat Restoration Project*, is designed to give game birds and animals the food and cover they need quickly and with a minimum of interference to normal farming operations.

Under the previous program, large numbers and varieties of trees and shrubs were used; however, these trees and shrubs, while beneficial to wildlife, were costly and required considerable labor to get them established. Studies have shown them to be slow in producing good wildlife cover. They rapidly lose their value to wildlife by crowding out the ground cover. Most species of wildlife need and must have nesting and roosting areas of low, dense cover provided by undisturbed patches of grasses, legumes, weeds, *etcetera* in addition to the woods and cropland.

Provided under the new program will be plantings which will produce a maximum amount of food and cover within one to three years with a minimum of cost and labor. Under this program the farmer does not have to give up a portion of his farm land for tree planting, but

may, after the five years are up, return the area to pasture or crop rotation.

New Agreement Program

Using a simple five year agreement the Division of Fish and Game will furnish without cost, *Sericea* and Korean lespedeza seed, sorghum seed, fescue seed and multiflora rose seedlings for use in area plantings, border strips, fence rows, ditch banks, *etcetera*. Areas may be almost any size or shape and located anywhere on the farm. A well qualified district biologist will study the area and farming practices around it and furnish the owner with planting instructions, suggestions and bulletins helpful in increasing game production.

The farmer will establish a wildlife habitat development on his farm which will not interfere with his normal farming operations. He agrees to plant the seed and/or seedlings and protect them from livestock until they will maintain themselves. Hunting may be permitted on the farm and developed area at the discretion of the landowner.

Let's take a close look at the plantings furnished by this project to find out what they will do and how they will grow.

Sericea lespedeza, a perennial legume, grows 3 to 4 feet tall and should be planted in strips 10 to 35 feet wide. It



Cover strip of *Sericea lespedeza* in foreground.

will give escape and winter cover and furnish nesting sites which are hard to equal using any other single plant. Plantings throughout the state show sericea will remain within the original planting strip and maintain itself indefinitely. Although unknown to many in Indiana, sericea is used in areas in nearby states for pasture and hay. Since sericea does not mature until the second or third year a cover crop of oats or other small grain would be extremely beneficial. Sericea may be used as a border along a woods where its deep roots can compete with the neighboring trees. Little is grown here in the way of farm crops, however the sericea strip will be highly beneficial to wildlife. Sericea strips can also be used on ditch banks, as a turn row at the end of fields, in fence rows, around farm ponds or across conservation reserve land.

Korean lespedeza or one of its many varieties excels as quail food and roosting cover, grows 6 to 12 inches tall and will reseed itself for several years without maintenance. Korean may be planted between strips of sericea, over sorghum plantings or by itself. Like sericea it is a legume and is found in many pasture mixtures.

Sorghum, either black amber or early amber variety, sown in small (one-eighth acre) patches will furnish ample winter food for rabbit and pheasant. A few handfuls of corn and soybeans will add variety.

Multiflora rose can be used in fence rows or small groups. This shrub grows 6 to 8 feet high and furnishes travel lanes, escape cover and a supply of winter food for rabbits, pheasants and many song birds. Multiflora rose information and seedlings may also be obtained free through the "living fence" program.

Fescue grass seed will be furnished in small quantities for seeding around ponds, grass waterways, and on the sides of ditch banks. Here a good soil holding grass is needed and fescue will serve this purpose while offering a nesting site for wildlife. Fescue bordered by strips of sericea lespedeza is an excellent cover combination for most upland game.

New Lease Program

Most farmers will find the preceding agreement program will meet their wildlife needs, however in the more open parts of the state the need for fence and windbreaks may arise. To meet this demand the Project has modified its ten

year lease so the landowner may obtain up to \$200 for fencing, provided his area can qualify under the following specifications:

The area must be at least two acres in size, be open with not more than ten percent cover of trees and shrubs, be at least twenty rods from any occupied dwelling and thirty rods from any permanent cover of an acre or more. Such a leased area will be established only on farms which permit some hunting.

A ten year lease and fence contract will be signed whereby the owner agrees to plant the area according to instructions furnished by the district biologist, to complete the fence construction within two years and to prevent damage to the area by fire or domestic stock.

(It should be noted that this new program does not affect *existing* wildlife refuge areas; they will continue under the provisions of the original lease and be maintained as refuge areas.)

The following seed and seedlings will be furnished by the project to develop the area with no cost to the landowner:

Sericea Lespedeza strips may be used around the pond areas, along windbreaks or at intervals across the area. Its thick

growth provides excellent cover for wildlife while helping to control erosion.

Korean Lespedeza may be used with pine or locust plantings to give a low ground cover which will help to control weeds but not compete with growing tree seedlings. It may also be used between *Sericea* strips to provide food and nesting cover.

Fescue strips will be used around the ponds, on the dam and earth spillway. It may also be used on any diversion ditch or grass waterway going through the area. This heavily rooted grass will keep soil from eroding into the pond and provide nesting sites for game birds and animals.

Sorghum consisting of a one eighth acre patch will be sown in a suitable location on the area to serve as a food source during the winter. Millet, an excellent duck food, may also be used on pond areas.

Multiflora Rose may be used around the area for added cover for wildlife and to help protect the area from livestock damage.

Red Pine, furnished under the lease program only, best meets the needs of

Excellent multiflora rose planting.



wildlife where a windbreak or group planting is required. In some localities damage by "tip moth" may exclude red pine for other uses; however, it does not impair its usefulness for wildlife and may even extend its period of use. In areas of extreme moth damage Austrian Pine may be substituted.

Black Locust, also used with the lease program for erosion control, scatters seed throughout the winter furnishing food for quail when other foods may be covered by snow or ice. Coveys will use locust plantings as feeding and loafing areas during the day, moving to warmer cover at night.

Now, with a little seed and very few trees, we can furnish farm game ample food and cover with little effort and no change in farming practices. Sorghum

can be worked in with regular crop rotation or left to reseed itself the second and possibly the third year. Lespedeza strips and patches may be worked in on "Soil Bank" land or into odd corners, ditch banks *etcetera* during regular crop rotation. Conservation clubs, Boy Scouts, 4-H groups and other organizations will find they can use this new program to good advantage by suggesting possible development sites to the farmer. If clubs will volunteer to furnish the labor and the Conservation Department furnishes the planting materials, the farmer has only to agree to such wildlife development on his farm.

Anyone wishing to establish wildlife plantings should write: Indiana Department of Conservation, Pittman-Robertson Project 6-D, 311 West Washington Street, Indianapolis 9, Indiana. Δ

Three-acre field being managed for rabbits. Multiflora rose in background, sorghum patch and brush pile.



*Mary
Chrismus
and*



*a
Happy
Noo
Yeres
from*

ELMER and OL' ALBERT

(and from Bill Burns, originator of "Lettur frum elmer")

NEWSOGRAM

by Clayton Bushong, Research Leader

NEW RESEARCH STUDY INITIATED

Your game research section is set up to find answers to questions of importance to the sportsmen of Indiana. Problems usually come to our attention from one or more of three major sources:

1. Inquiries from you.
2. Problems confronting administrators of the Division of Fish and Game.
3. Questions raised by our current or past work (further lines of exploration).

If a problem is felt to be of sufficient magnitude by administrators of the Indiana Department of Conservation, a tentative plan of action is formulated. Should administrators feel that a particular problem is not of sufficient importance to warrant further investigation, no action is taken. If, however, it is felt that the proposed study would furnish us an answer (or answers) in a biologically sound manner, funds are allocated for the necessary research.

A bill to permit dove hunting was introduced in the 1959 Legislature. It became apparent that there is a great divergence of opinion regarding life history, habits, and status of this bird. We have much to learn of migration, production, and wintering within various sections of the state. Your Research Project initiated a mourning dove study on September 1, 1959 to provide

unbiased information for the management of this bird.
Objectives of the study are as follows:

1. To find out the number of doves present each month of the year in northern, central, and southern zones of the state.
2. To determine what portion of our dove population is produced in each of these zones and in states to north.
3. To participate in nationwide dove counts taken in all states in spring.
4. To band a minimum of 1,000 nestlings each breeding season to trace movements, find wintering grounds, and determine how many are taken by hunters in states having hunting season.
5. To trap and band winter flocks to find out where our wintering doves are produced.
6. Approximately 70 per cent of our doves die each year. Few are taken by hunters in other states. It may be possible to further increase population by finding cause of mortality.

Our Study Leader John M. Allen, Box 117, West Newton, Indiana has the job of coming up with the answers. You could give him a big boost this winter by dropping him a post card if you know the location of any big wintering flocks of doves.

Information gathered on this study will be of value, not only to Indiana, but to all states confronted with the task of managing the dove. Getting valid data on any subject is never easy. Thousands of observations under countless sets of conditions are necessary. Should results of our study show that an open season on doves is desirable, we will not hesitate to make such a recommendation. Conversely, should it appear that doves should not be legally taken in Indiana, we will recommend that they remain a song-bird.



Ferdinand State Forest

THE IDEA THAT EVENTUALLY GREW into Ferdinand State Forest was born in the fall of 1933. Conversation started among a group of hunters about the possibility of creating a lake on ground they were hunting and acquiring some surrounding acreage. At the next meeting of the local conservation club the idea was enthusiastically supported and a committee was named to contact landowners in the vicinity. Pledges were secured and officials of the Department of Conservation were approached to learn if they would be interested in taking over such a tract,

were it donated. The offer was readily accepted.

Nine hundred acres were turned over to the state, which bought an additional 200 acres, making 1,100 acres on which to start development. A CCC* camp was moved in and an FERA* project started. In the spring of 1934 thousands of trees were set out on open and eroded areas.

The busy development program which followed included erecting a fire tower, construction of the beautiful forest lake

*Civilian Conservation Corps and Federal Emergency Recovery Act.

and a number of fingerling ponds below the dam which are operated by the Division of Fish and Game for stocking streams, and a fish hatchery service building was built. Timber was cut from the forest for construction of a superintendent's residence, barn and a service building. (The latter was unfortunately destroyed by fire a few years ago.) Picnic areas were developed and a shelter house built. Eight miles of forest roads were constructed as well as a scenic drive along the north shore of the lake.

After the development period the state inaugurated a program for further land purchase. In the twenty-six years since the first 900 acres were donated, the property has grown to 6,900 acres.

A considerable amount of mature timber has been marked according to good forestry practice and sold to bring in this forest's share of revenue to the Division of Forestry.

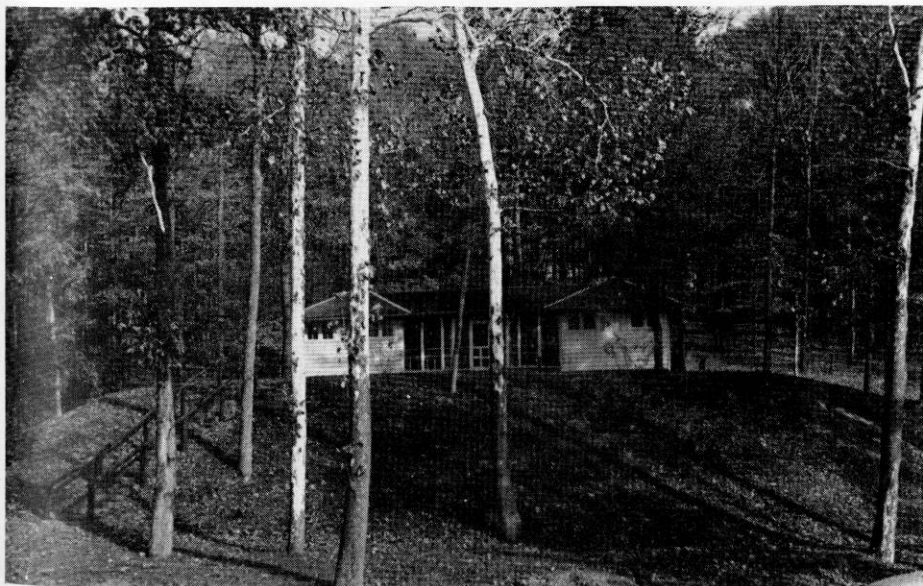
Ferdinand's lake is the focal point for intensive public recreation use. Each

summer visitors come, not only from cities and towns in Indiana, but a number of people return to this property year after year from Ohio, Kentucky and Illinois.

As a result of the current administration's desire to improve the entire State Forest system for more enjoyable use by the public, a good supply of drinking water has been provided along the lake shore. Toilets have been constructed, camping facilities expanded, and a larger area is being planned to accommodate 200 to 300 campers. Picnic tables and cooking ovens are provided along the lake and boats are available for rent. Persons who want to bring their own boats are encouraged to do so. A boat fee of \$5.00 is charged which gives the privilege of using any of the park and forest lakes operated by the Department of Conservation.

Local people continue to take great pride in this property. Recently meetings have been held to assist the Division of

Supervisor's cottage on a knoll surrounded by birches.





Fish hatchery service building.

Forestry in an organized way in planning more improvements and increasing the capacity of the forest to receive visitors. It is planned to develop a larger parking area, and the possibility of creating a small but very fine bathing beach is being discussed for such time as the funds are available.

Ferdinand State Forest is open in sea-

son for hunting as are the other state forests and the lake has always been an unusually good one for fishing. The lake area with its surrounding forested slopes is one of the beauty spots of the state forest system. The people of Dubois County who were instrumental in the origin of this refuge may be justifiably proud of the results of their efforts. Δ





Club officials drawing numbers for the casts.

UKC Registered

WILD 'COON HUNT

by W. L. THOMPSON
Editor

THE BROWNSVILLE CONSERVATION CLUB was the sponsoring organization for the United Kennel Club state wild raccoon hunt held at Liberty, Indiana October 9 and 10, 1959. It was the only registered licensed UKC hunt held in Indiana this year and the largest of its kind. Eighty-seven dogs participated in grade and registered night hunts. Dog owners from surrounding states attended to enter their dogs in what is considered the toughest type of hunt.

Headquarters for the meet was the Union County Fairground at Liberty. Accommodations included indoor stalls

for the dogs, camping facilities at no charge for the guests and food, served by the host club, was available on a twenty-four hour basis.

Friday night, October 9, entries classed as Grade Dogs (dogs not registered with UKC) were run. Saturday night, October 10, both the Registered Night Hunt and the Champion of Champions Hunt were held. Dogs participating in the latter two hunts are registered with the United Kennel Club, Lansing, Michigan.

A registered hunt conducted under the regulations and sponsorship of the Unit-



A group of dogs and their owners falling in after the cast numbers have been drawn.



Two casts of four dogs each getting ready to take to the field. Judge of the cast above is Jimmie Bond on extreme right. Below, judge is Kenney Fields, behind handlers.



Judges' table where rules and regulations for the hunt were given to owners and handlers.



ed Kennel Club is a most difficult and challenging hunt. Dogs must be topnotch hunters, for the least error in performance will count against them. Use of the point system of judging gives a dog a designated number of points for displaying certain hunting abilities. If the dog fails to show any of these abilities, points are deducted. The dog is actually hunting a wild raccoon by his own ability—no trails have been laid or dragged, no wild 'coons have been placed in trees prior to the race—the dog is entirely on his own. He must locate the trail by scent made by the 'coon, follow its trail and tree the animal by his own hunting instinct.

Only dogs registered with the UKC participate in a registered hunt and the competition is sharp. This organization keeps a complete performance record on each registered dog, the number of points made during each registered hunt, and if he is a Night Champion or a Champion of Champions dog. The number of times the dog has won a Champion of Champions Hunt also appears on the record.

It is interesting to know how the hunt is conducted and run, especially if you are a 'coon dog lover, for hunting like

this brings out the best in a dog and allows him to show both his training and his hunting skill.

Under UKC rules the registered race is run first. By means of a drawing, entrants are grouped into "casts" of four dogs which will hunt together. There is no limit to the number of casts in the race. Dogs go into the field with their handlers and there is a judge for each cast. The cast must hunt for at least three hours or in most hunts the time is four hours.

Points are awarded in this manner: As soon as a dog strikes or finds a 'coon scent, the dog will bark, bellow or bawl. His handler must be able to tell if it is his dog and call his dog on strike. The dog's ability to follow the trail made by the 'coon also wins points. If the dog barks treed, his handler must also declare his dog treed. The dog must also stay treed for at least five minutes to win the coveted number of points.

The first dog accomplishing these feats gets the most points and is the winner of that cast. The slower the dog is in performing the actions on which points are given, the fewer points won. If the dog should trail any wildlife other



Center trophy went to the Champion of Champion of Dogs; four on left to Grade Dog winners; four on right to Registered winners, Night Champion and runners-up.

than raccoon, points are deducted from his total score. When the dog barks treed, the 'coon, which should be in the tree where the dog barks treed, must be sighted by the judge before points can be awarded for that specific action.

Regardless of how many casts make up the race, the dog with the most points of all dogs entered wins the title of Night Champion. This is recorded in the kennel club's record on that dog. This dog, after being registered as a Night Champion, can only run in a Champion of Champions race where a Registered Hunt is conducted. He cannot run in a registered Champion of Champions race until he has been verified by the kennel club in their headquarters. In the Registered race prizes and trophies are awarded up to and including the fifth place.

A rule of the kennel club is that when a Registered race is scheduled, a Champion of Champions race must be run also. The more Champion of Champions winnings a dog has to his credit in the records of the kennel club, the more valuable he is, not only in trophies and ribbons won, but he can demand a high selling price or a high fee for stud or breeding.

Ground rules for the hunt require permission of the landholder to use the grounds and a special permit given by the Department of Conservation. No

firearms are allowed and no 'coon is shot from its tree. All state conservation laws are strictly observed.

GRADE DOG WINNERS

1st Place—Bernard Beaver, Connersville, Ind.; *2nd Place*—Howard Paxton, West Lawrence, Ohio; *3rd Place*—Howard Hughes, Richmond, Ind.; *4th Place*—H. W. Wakeman, Cincinnati, Ohio.

REGISTERED DOG WINNERS

1st Place—Estel Nash, Poneta, Ind.; *2nd Place*—Jim Shelby, Logansport, Ind.; *3rd Place*—Carl Davidson, Cincinnati, Ohio; *4th Place*—Cleveland Dunnaway, Harrison, Ohio; *5th Place*—Cloyd McDowell, Richmond, Indiana.

CHAMPION OF CHAMPIONS OF DOGS

Claude Phillippe, Versailles, Indiana.
(There are no lesser awards in this class.)

* * * *

Wayne Antrim, president and Cloyd McDowell, secretary-treasurer of the Brownsville Conservation Club, on behalf of the club members, wish to extend thanks to those who participated in making the hunt a success, and to the staff of Outdoor Indiana for covering the hunt for the magazine. Δ

11th Annual Irish Setter Club Trials

THE IRISH SETTER CLUB OF INDIANA, INC., familiarly known as "Irset", ran their 11th Field Trial, October 25 at Camp Atterbury, Edinburg, Indiana. It was their second American Kennel Club licensed trial. "Irset" is devoted to the breeding and promotion of the Hoosier Irish Setter in both bench shows and field trials.

William Stuart, Chairman of the Field Trial Committee, wrote this account of the trials.

"Camp Atterbury is a splendid place to run dogs as there are several thousand acres uninhabited and full of native birds. Major Christopher, U. S. Army, was a wonderful host. He came to the trial and enjoyed it and partook of the good food prepared by the women of the club and was helpful in many ways.

"There were three days of rain before the trial and Sunday was very cloudy with a high wind out of the west making bird scenting most difficult. Birds were released in the field but finds were few due to the high winds. (The deer population is increasing here; 25 to 30 were seen during the day.)

"The All Age was first to start at 7:30 a.m., the first brace being *Stu's Elmhurst Kate*—doing a good searching job with no luck—and *Lady Blue Ridge*, owner Mr. Motsinger from Illinois, running out of the country and being found lost. This dog, with a little more training for the handler, could be one of the best Irishmen in the middle west.

"First place in the Open All Age went to *Bruns' Rusty Hobo*, owner Dale Bruns of Milhousen, Ind., with a good pattern

1st the 4th place winners, left to right: 1. Bruns' Rusty Hobo, Dale Bruns, owner and handler. 2. Capt. Peter Townsend, Charles E. Campbell, owner and handler. 3. Red Star II, James Cunningham, owner and handler. 4. Bruns' Red Ike, Bob Bruns, handler.



and handled with one find. Second place, *Capt. Peter Townsend*, owner Charles Campbell of Indianapolis, with one find and a good pattern but did not lay out like Rusty. Third, *Red Star II*, owner James Cunningham of Hamilton, Ohio. This dog was close to Rusty and could have placed higher had he produced.

"The Derby, down at eleven o'clock, showed two dogs who were very good; it is too bad they had no competition. First place, *Bobo's Spring Willow*, owner Jim Malin, Louisville, Ky., being lost and found pointing a native bird, pheasant. Second place, *Verbu Eileen Oogh*, owner Miss Emily Schweitzer, Dundee, Ill., made a find.

"Six promising pups competed in three braces. First place, *Dee's Ginger*, owner Robert Bruns, Milhousen, Ind. Second, *Star's Pride*, owner James Cunningham, Hamilton, Ohio. Third, *Mary Dee's Autumn Blaze*, owner Max A. White, Greenfield, Ind.

"We would like very much for more Hoosier Irish Setter owners to support their breed and state club in the field trials. We have one of the greatest of hunting dogs, but he can only attain what his master permits him to. The club has always held these trials the last Sunday of October and expects to hold the 1960 trials again at Camp Atterbury and may the good Lord be willin' to give us less wind and rain and more dogs!" Δ

FROM FILE 13



"NEIGHBORS" WIN TOP BASSET HOUND STAKES—At the annual meeting trials of the Basset Hound Club of America, Inc., at Lebanon, Pa., in October, winner of the championship stake was Fld. Ch. Bose's Dusty Scarlet (at left) bred, owned and handled by Johnny O. Bose of Dundee, Ohio. Runner-up was Fld. Ch. Germann's Darky Dot owned by Merritt Bellows of

Sterling, Illinois. Flanking the champions and their owners are two of the judges. There were 164 dogs entered at the trial, unfortunately none from Indiana.

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RESULTS OF THE NOVEMBER FIELD TRIALS held by the Marion County Pointer & Setter Club, Inc., at Versailles State Park, are as follows:

PUPPY STAKE: First, *Paladin's Lucky Lady*, owner Fred Willoughby, Indianapolis; second, *Pete*, owner J. Dotson, Shelbyville, Ky.; third, *Park Girl*, owner G. Stewart, Versailles, Ind.

DERBY: First, *Oh Johnnie*, owner J. Dotson; second, *Rip's Little Dolly*, owner C. Hallcraft, Vevay, Ind.; third, *Clever Clarence*, owner B. Helton, Hamilton, O.

ALL AGE: First, *Little Gal*, C. Bottom, Indianapolis; second, *Dotland Penny*, owner J. Dotson; third, *No Alibi*, owner E. Thatcher, Indianapolis.

SHOOTING DOG: First, *Svengali*, owner W. Smith, Cincinnati, O.; second, *Steig's Mike Luminary*, owner C. Steigleiter, Cincinnati; third, *Poole's Bet*, owner C. Poole, Bedford, Ind.

SOIL CONSERVATION STAMP—The first of its kind, this 4¢ denomination commemorative stamp was issued by the United States Postal Department August 26, 1959, in recognition of all who work at protecting and improving our most valuable natural



resource, the soil. The stamp is a tribute to those demonstrating good soil stewardship. Its 3-color design depicts the orderly combination of practices and land use that carefully relate water, grass, trees, livestock, wildlife, and other crops of the land.

Δ Δ



KITTY & CAT—This kitten is probably wondering where to start such a man-sized meal as it licks its chops and looks the situation over. The flathead catfish was taken from the waters of Laughery Creek in Dearborn County by Reynold Scudder, Lee Pelsner, Richard Licking and Clint Hullman, all of Dillsboro, and Robert Sellers of Friend-

ship. The catfish weighed 34½ pounds and was 46 inches long. This is a record for fish taken from Laughery Creek in the last 20 years. The boys are having the fish mounted and it will hang in the American Legion Post 292 in Dillsboro.

Δ Δ



THIS LARGEMOUTH BASS was caught by Bill Huntley, pictured here, of Coatesville, Indiana September 22 about 9:30 p.m. in a gravel pit near New Winchester in Hendricks County. He caught it on a Creme Nightcrawler on a nightcrawler harness with a spinning outfit and 6-pound test line. The bass weighed 5 lbs., 12 oz., and was 23 inches long.

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IZAAK WALTON LEAGUE NEWS—

Donald L. Adair, president of the South Bend Savings and Loan Assn., is new president of the Indiana Division of the Izaak Walton League of America, succeeding Chester V. Haas, Sr., of East Gary, who completes a two year term in office December 31.

Also elected at the 1959 convention in September at South Bend were John Pence of South Bend, secretary; Donald G. Swinford of Kokomo, treasurer, and five sectional vice presidents: Paul Hake of Gary, northwest district; Mrs. Gertrude Smith of Hobart, women's vice president; Harry Peacock of Danville, southeast district; Carl V. Schugg of Fort Wayne, northeast district

and Carl Barraider of Terre Haute, southwest district.

Election of a central district vice president, 22 directors at large and 52 chapter directors will be held during the final quarterly meeting at Kokomo, November 29 in the Howard County Chapter Clubhouse. 1960 officers will be installed at that time.

(In a letter accompanying the above news release, James Brahos, secretary, said "Permit me to congratulate you and your staff on a splendid magazine. It certainly is an excellent publication."

Permit *us* to thank *you*, Mr. Brahos.)

Δ Δ

MORE KIND WORDS—"We think this is the finest magazine to be found—just love it. Can't think of a better gift for our friends. Sincerely, Jean O. Riethmiller"

"Folks—Enclosed find card and check per your letter of recent date. We sure do not want to miss ONE issue of this dandy little magazine. Regards to everybody, Milt Wy-song"

Δ Δ



TULIP BULBS FOR LINCOLN STATE MEMORIAL—1,000 tulip bulbs from The Netherlands were presented to the Indiana Lincoln Sesquicentennial Commission to be planted at the Nancy Hanks Lincoln State Memorial near Gentryville, Indiana. The

FISH FRIES—The Middletown Conservation Club has announced the dates for their winter and spring season Saturday fish fries will be January 16, February 13, March 19, April 9 and May 7.

If you have never attended one of these fries, it will pay you to do so—all you can eat for a buck and a quarter—and is it good! The Middletown club and the Knightstown Conservation Club recently released over 4,000 fish in the waters of their communities.

Δ Δ

LETTER COMMENDS PARKS SYSTEM AND INN SERVICE—"Gentlemen: Just finished reading my copy of your Outdoor magazine. It is well edited and contains many interesting articles.

For years I have been a great admirer of our State Parks and the fine manner in which they are being conducted. The Inn service has always been superb. Continue your "Lieber" interests and your foresight will be admired by future generations. . . . Very truly yours, Fred A. Diekmann, Evansville."

presentation was made by Holland's lovely Tulip Queen, Miss Saskia de Lange when she visited the memorial this summer. Pictured here Miss de Lange is presenting part of the shipment to Eugene Ayer, superintendent of the memorial at Lincoln State Park.

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CLUBS, ORGANIZATIONS AND INDIVIDUALS wishing to increase the rabbit population on their property can get the needed information by writing for the pamphlet "More Rabbits — The Easy Way". Address your request to the Division of Fish and Game, 311 W. Washington St., Indianapolis 9, Ind. Single copies free.

Δ Δ

CORRECTION—We failed to give proper credit for photos used with the article "Sporting Dogs" by Pete Czura which appeared in the October issue of *Outdoor Indiana*. Photos used were taken by Mr. Czura and the Nebraska Wildlife Commission.

—Editor.

Δ Δ

CAPTION CONTEST

Outdoor Indiana will award
A 2-YEAR SUBSCRIPTION
for the best caption
of 15 words or less
for the dog photo on the
back cover of this issue.

●

**Write your entry and your name
and address on a postal card.**

Mail to:

OUTDOOR INDIANA CAPTION CONTEST
311 WEST WASHINGTON STREET
INDIANAPOLIS 9, INDIANA

●

**All entries must be postmarked
by midnight January 15, 1960.
Winning caption will be published
in the February issue.**

THE STAFF OF

Outdoor Indiana

AND

THE ENTIRE DEPARTMENT
OF CONSERVATION

wish
to
extend

SEASON'S
GREETINGS

to each of our

FRIENDS

and

READERS

