

Arrow-Lined Kingfisher Is "Crash Diver"

William L. Finley, D. Sc., and Ed F. Averill
Write These Wild Life Articles

Woods Pussy Docile But Not Defenseless

We were standing on the hill below our house overlooking the Willamette river. The round October moon was a sure sign that animals would be on the hunt and growing fat and furry for the winter. Branches of the fir swayed and there was a stir among the maple leaves. As I turned my nostrils to the wind, the message came in an unmistakable odor. It was not unpleasant. It never is in the open field or here on the slope above the river.

The next day when my neighbor passed, he said he was going to block up the hole under his chicken yard fence. He, too, had read the sign on the wind and was sure a skunk was in the neighborhood. He is of farmer stock, the kind that kills skunks. I was hoping a wood-pussy might some day take up a homestead on our wooded hillside.

TWO SPECIES IN OREGON

Two species of skunk live in Oregon. One may see both kinds along a paved highway where they have been flattened out by racing automobiles. The little spotted skunk is about the size of a silver-gray squirrel. The striped skunk is two or three times as large. Polecat is another name that has been given the skunk family as a whole. However, this name is not correct, for the true polecat is an animal of the Old World.

In your natural history, you may read that this is a feeble animal, almost defenseless. Almost! But not quite. Poor little wood-pussy! He cannot run fast. In the face of danger he just stamps his feet, humps his back like a pinched wasp and turns his tail.

One day we crossed the river and on the trail up the hillside came to the upturned roots of an old fir. Here we met a striped skunk with her seven little kittens playing in the grass on the sloping bank. As I approached slowly, they stopped to look at me but were not afraid. Within six feet of the mother, I reached over slowly and petted one of the little skunks. He merely ambled up the bank.

LAST TO START TROUBLE

These animals are more friendly and reliable than most people think. They are not looking for trouble and are generally the last to start any.

Two days later, passing the same place, I found the bodies of five of the kittens lying along the bank where someone had killed them with a stick. So often this is the story of a family of wood folk. The damage a skunk does is often exaggerated. He feeds on various kinds of insect life, also birds, mammals, fish and even reptiles and fruit.

There is an old story that if you pick up a skunk by the tail, he cannot eject his scent with his feet

Careful, Pup, Bad Medicine



dangling in the air. In Eastern Oregon a trapper came upon a young skunk under a bush. He struck the branches with a stick, and the youngster retaliated by using his scent gun. He did this several times, until the supply of ammunition was exhausted. No one has yet discovered just how rapidly a skunk can manufacture his scent. But in this case when the trapper picked him up by the tail, the little wood-pussy still had a final shot in reserve, so the prescription did not work.

Research Shows Crater Lake Full Of Trout Fodder

A thorough research of the food habits of Crater Lake trout the past summer by J. Stanley Brode, ranger-naturalist, brought forth proof that the lake is far more abundant in food values than had been generally thought.

In the past fresh water shrimp (amphipod) had received credit for being the main source of food, but an examination of the stomachs of 46 silverside and four rainbow trout revealed that water fleas (daphnia pulex) made up 62.8 per cent of the sustenance of the fish. Fresh water shrimp was credited only with 4.7 per cent. Insects made up 9.6 per cent; snails, 10.9 per cent; minnows, 8.7; worms, 2.5; and plants eight-tenths of one per cent.

While the water temperature is hardly 40 degrees from depths ranging from 75 to 200 feet, the water



Oregon skunk normally gentle creature but well equipped to repel trespassers if need be. They are tamed easily as the picture indicates. The lower photo shows a woods pussy in agitated mood.

fleas are principally found within this range, indicating trout swim deeply in Crater Lake. The flea is the smallest type of food, several thousands of them being found in the stomach of one fish. The largest food specimen was a seven-inch trout found in the stomach of a silverside.

Native Coot Declared Good Food

The American coot, commonly called mud hen, has never been an attractive item in the game bag of hunters on the Pacific coast. This has been offered as a good reason for its abundance. In the past ducks have been abundant and perhaps the name, mud hen, has spread the idea that the bird is not an attractive part of a sportsman's menu.

The coot is no more of a mud hen than the common varieties of ducks as far as its food is concerned. It lives largely on grasses and grain. Water hen, marsh hen or meadow hen are common names that indicate the bird's traits and food habits.

Many gun clubs in the West consider the coot a nuisance because it takes the natural food of ducks and especially the grain that is scattered in ponds to bait the ducks within shooting distance.

Coots flock in winter time all through the southern states. On baited areas, the coots are friendly and come right in for food. The ducks use them as buffers, waiting a while to see whether the coast is clear of danger.

In some localities, hunters make a business of killing coots as pests. If ducks continue to disappear the time may approach when sportsmen in the West will take on the coot as a game bird.

Along the Atlantic coast, hunters apply the name of coot to some of the marine ducks which are the several species of scoters. These are hunted and killed as game birds, but as food they are not equal to the real coot or marsh hen. The scoters live on small mussels and shell fish. The flesh is coarser and more fishy in flavor than that of the American coot.

PLATFORM NESTS

Coots breed up and down the Pacific coast in marshes or tule-bordered ponds. They make platform nests, woven together like wicker baskets, in the reeds just above the water. A young coot just out of the egg is a strikingly colored chick with no resemblance to his father or mother. His body is covered with black down but projecting from his neck and head are crinkled feathers with hair-like ends of bright orange color. His bill is red.

Anyone may recognize the American coot with its slate-colored body and black head in contrast with the white beak. As a coot swims, his head moves forward and backward. When forced to fly, he patters along the surface quite a distance splattering water with his feet and wings. In flight, his feet stretch straight out behind looking as if he had rather a long tail. This appearance easily distinguishes him from any of the common ducks.

Six Young 'Fishers' Sittin' on a Limb



All head and beak, streamlined to pierce the water without delay, the Kingfisher makes today's headline. Solitary fellow, the king, and not far removed from reptilian ancestry as indicated in his mode of nest building. A hole deep in a bank serves adequately and the theory is the head develops most because that part of him gets the air. Below is a colony of American coot, sometimes called mud-hen. Contrary to popular belief, the flesh of this bird is not bad eating.

Michigan Hunters Hard on Pheasants

Officials of the game division of the state department of conservation for Michigan estimate that at least 700,000 Chinese pheasants were killed in that state in 1934 by licensed hunters.

They arrived at this figure by taking the reports of 69,845 hunters who killed approximately 180,000 birds, and then taking this as a killing basis for the 313,000 licensed hunters.

The Detroit News in commenting on this report questions its accuracy

and says it is hardly fair to assume that 313,000 licensed hunters killed 2.6 birds each. According to the News, "one could just as well say that 500,000 birds were killed and perhaps be nearer correct. The 700,000 figure carries the implication that 'Michigan is a pheasant state,' which it isn't as yet."

Throwback to Reptile Age in Home Building

Every boy and girl who has been up and down the river knows the kingfisher. The color of his coat is matched by the blue water. With a rattling cry he flies off some limb, sometimes to hover directly over the water with wings vibrating in rapid strokes and watching for his game below. In flight, he often changes gear, alternating between slower and more rapid wing beats.

When you first see a kingfisher, he seems topheavy in appearance. Everything else seems forfeited to furnish him a big head, a spear-pointed bill and a pair of strong wings to give this arrow-shaped bird a good start when he dives for fish. His feet are so small they are hardly large enough to support him, so he makes a poor show at walking.

Some sportsmen advocate shooting the kingfisher because they claim he destroys too many trout. Along the Willamette he lives largely on crawfish and slow-moving trash fish that are of no economic value. Occasionally he catches frogs, lizards and beetles. In the Southern states where streams are few and run dry in summer, this bird takes to a fare of grasshoppers and mice.

The kingfisher is not much above his reptile ancestors. Instead of building a nest, as other birds do, he finds a bank and digs a hole, burrowing back three or four feet and making his nest at the end of a dark cave. Young kingfishers never get a glimpse of sunshine until they are ready to leave home. Like a potato in a cellar, all the growth goes to the end nearest the light. His face naturally all goes to nose and bill.

Some birds are sociable and like to flock, but the kingfisher lives a solitary life. He seems to think a companion would talk and scare the fish, or he is too much of a hermit to enjoy the friendship of others. If a good bank is not available along the river, he may find one a mile or so away.

We discovered a kingfisher nesting in a bank on Portland Heights. It was a sort of suburban home, quite a distance from his place of business. His rattle was often heard above the house tops of the crowded city. The young kingfishers didn't leave home until fully fledged. From the high position on the heights they cruised across the city to the river on their first outing.

It takes considerable practice for a young kingfisher to learn to catch a fingerling a foot below the surface. The fish is never where it seems to be because of the refraction of the light. There is a different density between air and water. The bird has to learn this by experience and not in school.

Crow, Magpie and Jay Mix Brains and Cunning

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Tongue Cutting Barbarous and Does No Good

The family of crows, magpies and jays generally is considered the keenest of the feathered class. People are accustomed to call these birds intelligent, which means they live by their wits and are able to commit overt acts and not get caught.

Among songbirds, the Corvidae family is just a bunch of rascals and thieves. If the home is left without a guard or the door is not locked, any smaller bird is likely to return and find the nest mussed up and the eggs gone. If birds had a police system, the main schedule would be trailing crows, jays and magpies. In traveling, their mufflers are open and you hear the harsh notes. But when these birds hunt, they slip through the bushes and trees as quietly as a sunbeam.

Because of their tricky habits, magpies and crows are often kept as pets. Life is limited in a prison cage, so they furnish a certain amount of amusement to a bird fancier. They learn to talk quite readily, even though one cannot understand their language. They are quick at imitating and repeat certain words as distinctly as a person.

No one seems to know just when and where the old story started that a crow or magpie must have its tongue slit before it can talk. Nor can anyone explain just why such a story is spread so widely among people. It's one of those age-old, foolish ideas that starts a cruel and barbarous custom. Birds talk with their throats, not with their tongues. A more sensible course to follow would be to try tongue-splitting on the human race to prevent spreading such ignorance.

Anglers O. K. Darling Drive To Rout Carp

Duck shooters of the Northwest may not like the government's new regulations regarding that sport but they will surely have nothing but praise for Ding Darling, chief of the biological survey, in his efforts to rid the streams and lakes of carp. It was the marauding hordes of the imported carp "trash" fish that rooted out and destroyed the wapatoes in Lower Columbia river waters, thus destroying the greatest source of natural duck food we have.

Darling's proposal to exterminate carp in the streams and lakes of the country did not meet with all smooth sailing, however. Many sportsmen feared that in seining out the carp the game fish would also be destroyed. The controversy seems to have been ended, according to a dispatch from Washington, by an arrangement whereby game wardens will accompany the seining crews to see that game fish are removed uninjured. But it is not all over yet, Ding says.

"Now all we need is the money. Three times we've been turned down, and there is no assurance we'll get it this time."

The cost of seining the streams, Ding estimates, would run from \$7000 to \$12,000 a county. He added: "We could use \$5,000,000, but if we get half that it will be enough to go a long way."

'Ware These Fellows



The Pacific Coast fortunately has been virtually free of the starling, and good luck it has been. For in the Old World and in parts of Eastern United States the European bird has become so numerous and familiar as to be a pest. However, fears are felt they may turn southward from Canada, where they have been a nuisance. The bird is about a robin's size and noisy.

Sportsmen and Naturalists Fear CCC Road Building Peril to Deer

Oregon naturalists and sportsmen are not the only ones who view with alarm the many roads laid out by CCC workers throughout the forested areas. Fences to block off such roads as run through deer-inhabited country are advocated by William Lyon, Detroit, Mich., sportsman, in an effort to stop deer hunting by auto and attendant increased slaughter.

Lyon says "fences could be erected at the opening of the season, blocking the roads, and removed at the close, opening these new highways to travelers. During the open season the measure would afford protection and a sporting chance to animals, which were overhunted even before these new roads opened the denser forested districts to auto-hunting parties."

The additional menace to deer by the building of good roads into the mountains of Oregon is not limited to the open season. It has made possible spotlight and other illegal hunting at other seasons. Residents of the Pis-

tol river sector of Curry county told the writer that during July and August of this year many deer were taken out by night hunters who used a newly-constructed CCC road up that stream into the heart of one of the best deer sections of Oregon. Many residents insisted the road is valueless from a forest protection standpoint, since there is no merchantable timber in the area served. They say so-called Curry county "forest fires" should more properly be termed "brush fires."

Amateurs Will Sail

An "All-America" squad of 18 college, high school and sandlot baseball stars, selected from all parts of the country, will sail from San Francisco, October 17 to play a series of games in Japan. The squad, selected by the Amateur Baseball Congress of America and representatives of the American Olympic committee, will play 20 games in Japan and may stop off in Manila, P. I., for an eight-game series.

'Blind as Bat' Is All Fiction; Vision Amazing

When the Pack-Finley expedition was in the Grand Canyon National park, Ronald Colman and William Powell of Hollywood were spending their vacation at the inn at the foot of Bright Angel trail. The screen artists were familiar with motion picture cameras, but they were not acquainted with wildlife in the deep canyon.

After dinner a flock of bats began flitting and circling among the trees. They were flying in and out of some small caves up the side of a cliff. No one knew just what species lived in the canyon and the motion picture stars had never had a close-up view of a bat.

"All you have to do is climb up with a stick and bat one down as he flits in and out," said the naturalist.

The artists were soon armed with switches and each took a stand at the mouth of the cave, but neither could hit a bat.

The next day, they were all keyed up for another hunt. It looked easy enough, but neither could hit one of these flying mammals that were too speedy at dodging.

The old saying "as blind as a bat" contains little truth. The eyes are small, but the vision is remarkable in the semi-darkness or even in broad daylight. It is the sense of hearing or feeling air vibrations that is more marked in the bat than in any other mammal. The large ears and delicate wing membranes catch the vibrations and keep him from being knocked down by a stick.

In the total darkness of a large underground cavern a bat flies at full speed through the winding hallways as easily as a bird sails among the forest trees. The delicate sense of feeling prevents him from bumping into any object and he quickly alters his course.

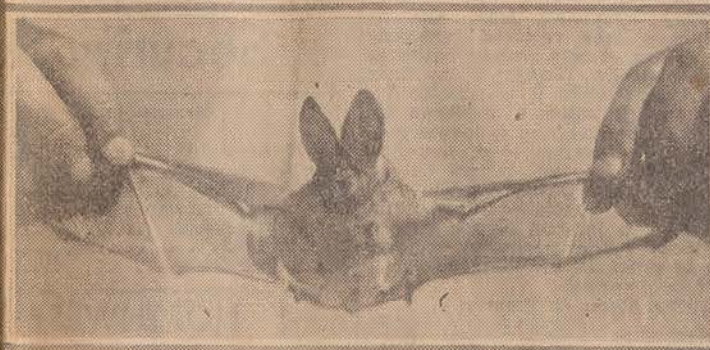
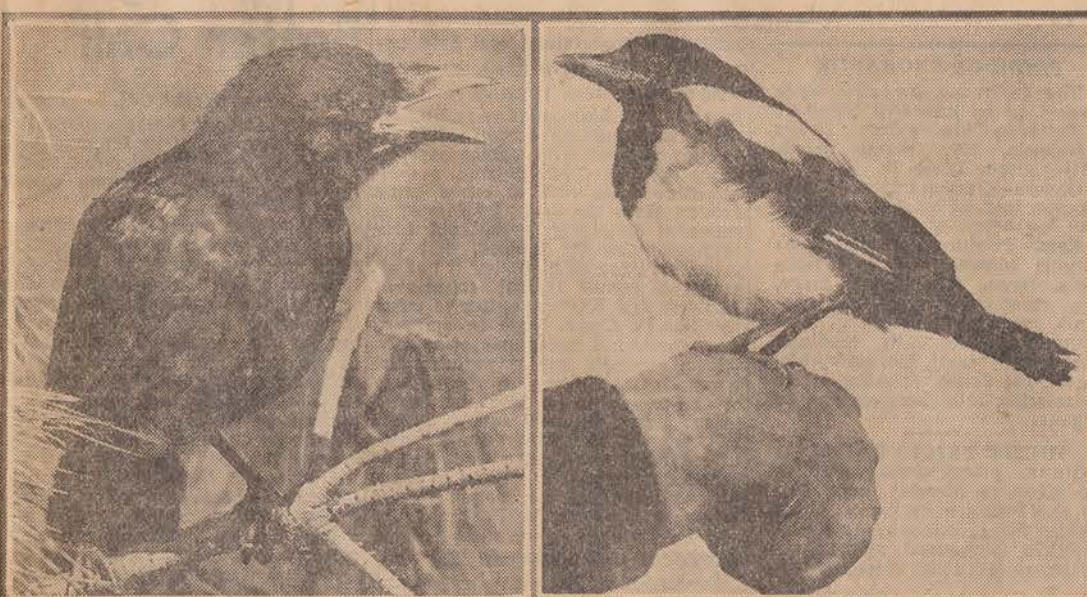
There is a prevailing prejudice in the human race against a bat that flits and wavers through the darkness. However, his bill of fare is largely of mosquitoes and other insects that are detrimental to man. Because of the economic value of bats, some cities in Texas have constructed special towers for bats to roost in.

Although a bat can fly, he has no connection with bird life. His body is covered with silky hair. He has arms with elongated fingers, and between these finger bones and the body is stretched a thin, rubbery skin, enabling him to fly like a bird. The flight is not straight and steady like that of a bird, but he zigzags as if aimless. However, it is with definite purpose, because it is while flying the bat catches his food.

The bat's hind feet have little claws. These are the main support of the body when it rests. He sleeps by hanging upside down. At the top of the wing is the thumb or little sharp claw which the bat hooks into the surface, enabling him to crawl. It is an awkward movement, but with wings closed, he can crawl up a rough wall like a mouse.

In Carlsbad cavern in New Mexico bats are found roosting in enormous numbers that must run into hundreds of thousands. The floors of some of the largest rooms were originally covered to a depth of a hundred feet with guano deposit. It is estimated 100,000 tons of this guano have been taken out of the cavern. Who can figure out the world of insects these bats have eaten?

Crow, Magpie and Bat, but He's No Bird



Everybody knows the big "Caw, Caw" bird so lets hurry on to the bat. However, the magpie (in the upper right picture) might be termed a crow with Sunday raiment. They're a good deal alike. Now for the winged mammal and he's all animal, too. The upper photo shows a common variety of mother bat with young at her breast. Lower—A long-eared fellow, or it may be a girl. Bats, much maligned, are in reality a boon to humanity in their enormous consumption of insects.

Dakota Law Boon To Upland Birds

Great saving of North Dakota upland game is expected this fall as the result of new state regulations prohibiting shooting with shotguns carrying more than three shells.

In line with the federal regulation limiting duck guns to three shells, the state went a step farther and set up the same rules for taking of upland game, and cutting down maximum bags.

Acting Governor Walter Welford proclaimed the new regulation and also opened the deer season in December instead of November.

Hot Spot Usurped By Trade Angler

Feeling between sports and commercial fishermen was not helped any by an incident on the Siletz river recently. Mr. and Mrs. Jack Nordstrom were trolling for jack salmon in the river above Kernville. They located a stretch of water where the fish were taking spinners freely. A commercial fisherman with his net on the rack saw what was happening and immediately laid out his net so that it was impossible for the trollers to continue their fishing at that spot.

Starling Host Invasion From Canada Feared

Recently the biggest deportation of aliens in several years left Portland under guards of the immigration service. Federal laws are tightened to keep out undesirable foreigners and Uncle Sam's men keep busy catching and deporting those who slip past the lines.

The government laws regarding importation of foreign feathered residents are stricter than those relating to the human species, but it will take more than the immigration officers, the biological survey, the state police forces, the army and navy to stop the flocks of crested Mynas or Chinese starlings now sweeping the Canadian border and spreading south.

This member of the starling family, a native of Central and Southern China, now is a well established resident of the city of Vancouver, B. C. Thousands are living in the business blocks of the main section of the city, which is the established stronghold. Here the young are raised and have spread to surrounding towns and especially the agricultural area along Fraser river.

Recently flocks have been seen across the boundary line as far south as Bellingham. One starling was reported in Portland a few years ago by Ira N. Gabrielson, but this may have been an escaped cage bird.

The question arises as to what the future effect of this introduced species may have on our native birds and agriculture. In a bulletin published by the biological survey of the department of agriculture in April of this year, the Myna is reported to drive out flickers that nest in holes in trees and native songsters that live in bird houses. As it becomes more abundant, it is likely to affect crops by feeding on berries and fruit.

According to records, the Chinese birds were first seen at Vancouver about 1897. In 1920, Mr. Kermod of the Victoria museum said there were about 1200 roosting during the winter in buildings in the busiest part of the city on Carroll and Cordova streets. By 1925, it was reported the number exceeded 20,000.

The crested Myna is a bird easily identified on sight. It is about the size of a robin, but looks more like the common blackbird because its coat is black. Its distinctive mark of identification is the band of white on its wings, also a tuft of short feathers at the base of the beak and inclining forward and upward like a pompadour.

Now Goldfish Swim at Peace

Jack Horton of the United States forestry service tells a good joke on a kingfisher, a bird like the ordinary angler, who can't look at a fish in a stream without wanting him in his creel.

The forester during spare moments had built a little rocky pool in his yard. It was an attractive home for a little school of goldfish. One day the golden glitter caught the eye of an old kingfisher cruising casually across the block. Like some people, he was always on the watch for an easy mark, and a slow swimming fish is easier game than a trout. Circling, he drew up on a branch and sized up the situation at a glance. A headlong dive, a splash and a goldfish

took his first and last ride in the feathered plane.

In a few days, Jack was bargaining for a new school of fish and laying plans to protect them. Soon after, the feathered angler, sailing over, caught a glimpse of the same pond and a new supply. In hunting, a moment's hesitation may mean an empty bag. So with a quick turn, the kingfisher headed like an arrow for the golden dinner. A foot above the surface he was flattened. His head went through the wire netting that Jack had spread above the pool, but his shoulders wedged. Mussed up and scared, he shot out of the yard leaving a trail of blue feathers. The goldfish in the pool now swim in safety.

Hell-Diver Swift, But Bass Sometimes Gets Him

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Men, Cash But Nothing Done To Assist Fish

Old stories of locking the barn door after the horse is stolen or killing the goose that lays the golden egg are so often applied to conservation of our natural resources. It is a more important step, however, to find the horse and, if possible, return him to the stall, also save the goose and give her a place to nest. One can hardly consider the story of the Sandy river and not bump into one of these old proverbs at the turn of every page.

This river was discovered by Lieutenant Broughton of Vancouver's expedition, October 30, 1792. In Lewis and Clark's Journals mention is made of these explorers stopping at its mouth. They called it Quicksand river. Later, through usage, the name was shortened to Sandy. Its waters come tumbling down from the glaciers on the west side of Mount Hood. For a long time it was a broad stream for the migrating schools of trout, salmon and smelt.

Years ago the state maintained a hatchery up the Sandy to increase the runs of salmon. One could walk along the shore a few miles from Troutdale and watch hundreds of salmon spawning in the shallow riffles. The hatchery has fallen to pieces and the salmon runs have passed.

WAGON LOADS TAKEN OUT

Also years ago one of the attractive features was the spring run of smelt. Hundreds of families gathered along the shorelines with improvised dip-nets of all kinds to harvest this delicious pan fish. Many will remember a time further back, when farmers hauled out wagon loads of smelt to fertilize their fruit trees. They thought the supply of fish was inexhaustible. But with the diminishing runs restrictions were placed on the catches so enough brood stock would be left for future harvests. Few persons foresaw the approaching calamity that would smother the smelt runs.

Conditions of the river have been changing. The channel has been gradually filling up. The sweep of the mighty Columbia in its flood stage helped to block the mouth of the Sandy with drifting sand and gravel. It is the same condition that would block commerce from the Columbia river if no jetties had been built to deepen the channel. The water of the Sandy river near its mouth has been spread out over such a shallow area that fish cannot enter and ascend to their former spawning beds.

OFFICIALS AND MONEY

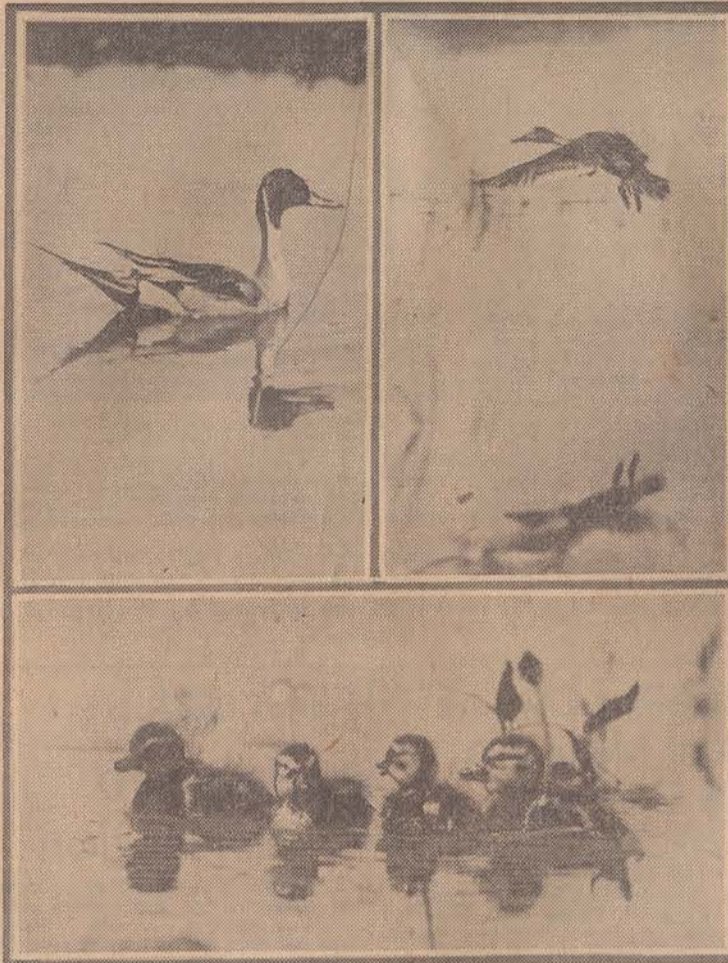
Oregon has both a fish commission and a game commission supplied with state funds to protect and conserve the fish resources of the Sandy. There are officers to watch the fishermen. There are men to investigate fishways and fish screens, hatcherymen and fish experts. But when a condition arises that kills the combined fish runs of a whole season and automatically destroys the crop that should follow every third or fourth year, it is too hard a problem for state commissions and all their employees to solve.

When the state of Oregon cannot protect and save the natural resources within its border the next step is to appeal to the federal government for funds. This is a frank admission that the state cannot save its fish runs in the Sandy, and is another step toward federal control of the state's outdoor resources.

GOAT BUTTS IN

A goat which escaped a Colorado ranch several years ago now feeds with the wild deer in Rocky Mountain National park. Although it still wears a tinkling bell, it is accepted by its wild companions, who pay no attention to the noise.

A Complete Family of Pintails



Here's a family of pintails, whether they are closely related is hard to say. Above on the left is male at rest and on the right a female on wing. Below is a group of young pintails. These pictures were taken at Klamath lake.

New Duck Ban Meets Variety Of Opposition

The impossibility of making shooting regulations that will satisfy all hunters is demonstrated by the attitude of Illinois nimrods toward the new federal duck restrictions. While Oregon and Washington followers of the sport object to the ban on "feeding" those in the Midwestern states find more serious objection to bag limits and hours of shooting.

C. F. Thompson, director of the state department of conservation, pointed out that the law limiting to 10, the equivalent of one day's bag, the number of ducks to be kept in one's possession, is, in his opinion, "ill-advised."

"If a hunter bags the limit today and again tomorrow he should be allowed to keep all he shoots," Thompson said. "As the rule now stands, it is sure to lead to an unnecessary waste of birds. If a man spends more than one day hunting, he's going to get rid of all but one day's bag."

Thompson disagreed with hunters who oppose shooting over baited areas. "No real duck hunter shoots over a baited area," he said. "Those who have maintained feeding grounds have done their shooting outside that region and will continue to do so."

BOMB-EATING SHARK

A dynamite bomb in perfect condition was found in the stomach of a shark caught near Morro Castle at Havana.

It is believed the shark swallowed the bomb two months ago when blasting was under way at the entrance to the harbor.

Duck Soon Hep to Food, Protection; Local Case Cited

One of the most important winter refuges for wild ducks is at Lake Merritt in the center of the residential section in Oakland, Cal. For many years the city has supplied and scattered grain around the border of the lake, and this has proved a valuable attraction for residents and visitors.

Ducks are more intelligent than we think. A flock coming from the north in the fall is exceedingly wild and wary. Outside the city one cannot get near them. They circle above Lake Merritt, drop down and they know they are protected. The cafeteria is free. Within half an hour after arrival, these birds will allow any person to come up within a few yards of where they are feasting.

The lake at Eastmoreland, owned by the city of Portland, is not as large as Lake Merritt but is an attractive place for both ducks and people. Each winter the Portland chapter of the Izaak Walton league has supplied some grain and this makes an excellent wintering spot for ducks. It would be worth while if the city commission supplied and scattered grain. This would increase the number of duck visitors. Some would remain through the winter and make their nests in the reeds would become permanent residents about the lake. The rest of the flock would be in better condition in the spring to move north to other breeding areas.

FIGHT BUGS WITH STEAM

Railroads placed steam jets before locomotive wheels to blow locusts off the tracks in the last South African invasion by the pest.

River Pollution Law Violation But It Goes on

Governor Clarence D. Martin of the state of Washington, when invited recently to speak before the Progressive Business Men's club of Portland, called attention to the great value of the outdoor resources of Oregon and Washington. At the same time, he put Mayor Carson on the spot when he asked why Portland does not stop polluting the Willamette river. This is a violation of the state law. It is a menace to public health. It is gradually killing off our most valuable runs of salmon.

After Portland turned the Willamette river into a public sewer, the city health officer decreed that it was unlawful to go swimming in the Willamette and it was dangerous even to touch the water. The mayor and the city commissioners face a problem which up to the present time they have lacked the ability to solve.

SAME IN OREGON CITY

The same conditions prevail in Oregon City where the mills and factories dump their waste products and the city empties its raw sewage into the Willamette. Recently a resident who has a home on the Willamette river just below Oregon City asked the following question:

"If I were to take my garbage and dump it on the streets of Oregon City, what would happen?"

This taxpayer answered the question himself. He said he would be arrested and fined for violating the city health ordinances.

On the other hand, the city itself violates a state law which provides that it is unlawful for any corporation to dump sewage into the rivers of Oregon.

PROPERTY DAMAGED

The above taxpayer owns a sandy beach just below his home. The fifth from Oregon City washes up on his shore preventing him and his family from using their property. The city in the violation of a state law has lowered the value of the taxpayer's property, and for this he has no recourse.

Someone suggested he could take the matter into court if his property were injured. "I haven't the funds to hire attorneys to fight the illegal actions of the city," he replied. "My taxes help support state officers who should enforce state laws. Sooner or later the state law will prevail."

Wise Nature Safeguards Birds When Moulting Dulls Wings; Cats and Other Enemies Foiled

Moulting of the plumage of birds in the fall differs widely in various species. After the wing feathers become worn, if a sparrow or robin sheds its flight feathers at one time it would not be able to fly. Entirely defenseless, these birds would have to hop around on the ground, and most of them would be killed by cats and other animals. This danger is avoided in all land birds by only one pair of the primaries or flight feathers dropping out at a time, one from each wing. The first pair to drop out is farthest from the front of the wing. The next pair is not moulted until the first pair of feathers is nearly full size. In this way the bird's flight is not crippled.

Among the ducks, geese and some of the other water birds, the moulting of the wing feathers is entirely different. All the flight feathers are moulted at one time, and during this period the birds are unable to fly at all. Just before the moulting season the birds congregate in a large

body of water. Here they can swim and dive, so are well protected from ordinary enemies.

At this time of the year when the bright colors of the male duck are likely to be a shining mark for enemies, Mother Nature provides a complete change of dress, and the male duck sheds all his bright feathers and for a while he wears the more invisible cloak of his mate. It is then difficult to tell male from female. This is called the "eclipse plumage." When his flight feathers grow in and he is able to take to the air again, the more invisible mantle is lifted and his brilliant colors are restored.

The male pintail duck or sprig is easy to recognize. He has the pointed tail feathers with the white breast and neck, and the white line extending up to his brown head. These change during the moult and he looks like the grayish-brown female. The male mallard duck also loses his green head at this season and looks like the brown female mallard.

Game Thrives In Alaska as Bans Enforced

Brown bears, beavers, martens, mountain sheep and mountain goats have increased under federal protection in Alaska, says W. E. Crouch of the United States bureau of biological survey. Crouch was in Portland last week on his way back to Washington, D. C., after a six-week tour of Alaska.

According to the bureau's representative, the new regulations provide two sanctuaries for brown bears on Admiralty Island and reduce the bag limit on this island from two to one for each season. These provisions are in keeping with the announced Admiralty Island bear management plan.

Heavy trapping in recent years, Crouch says, has made it necessary to close the season on beavers and martens throughout the territory to insure maintenance of sufficient breeding stock. Mountain sheep and mountain goats under the new regulations enjoy full protection in an area in the Girwood-Mantanaska drainage.

Cold Gets Credit Bugs, Birds Thrive;

A noticeable increase in insect life and a correspondingly larger number of song birds in the vicinity of Ludington, Mich., is attributed by local naturalists to the scarcity in the number of snakes and toads since the severe winter of 1933-34.

Dr. Joseph Loppenthien is of the opinion that snakes and toads failed to dig in deeply enough to escape the severe freezing when temperatures dropped to 20 degrees below zero, and that many did not survive until spring. The following summer saw insect hordes increasing, but insectivorous birds have maintained nature's balance.

FLOWERS BLOOM LATE

Flowering time for mountain blooms was about a month later this year than normally, according to reports from Glacier National park naturalists.

Earliest flowers, such as the Douglas phlox, appeared in May in the Lava Beds monuments of the lower levels of the park, and there had the longest season. They followed the melting snows upward, new blossoms appearing on the slopes until the end of August.

Not So Fast



Morris V. Leader and his double catch, a 7 pound 2 ounce bass and a "hell diver," which were landed in Broad slough on Sauvie island. The bass caught the "hell diver" and Morris caught the bass.

Seven-Pounder Hooked, Then Disgorges Bird

The pied-billed grebe, commonly called "hell-diver," is popularly supposed to be very swift in the water. Indeed, he is reputedly able to dive at the flash of the powder and avoid the charge of shot aimed in his direction by the thoughtless man with a gun. However, he is not swift enough to escape the hungry bass he may meet under water.

Morris V. Leader, Portland manager for the J. A. Folger Coffee company and a veteran bass angler, was fishing in Broad slough on Sauvie island a few weeks ago when he hooked and landed a large-mouthed black bass. When weighed later the fish registered 7 pounds 2 ounces. The big fellow was attached to a string and placed in the water alongside the boat.

A few minutes later, as Morris looked over the side to admire his catch, he was surprised to note the fish was disgorging a bird. This was identified by Fred Haldeman, veteran employee of the game commission, as a half-grown grebe. The bird in diving to obtain his own meal had provided one for the bass. It weighed 1/4 of a pound.

Haldeman and Leader, who have been observing the ways of bass for many years, say the angler will learn many interesting things about the food habits of this fish if they will take the trouble to examine the stomach contents of the ones caught. For instance, at Blue lake both men have observed swallows dipping to sip the water only immediately to disappear beneath the surface. Several fish have been taken with the swallows in their stomachs.

Leader tells of a farmer of the Brownsmead district who missed his young ducks almost as fast as they were hatched. A mink was blamed for the disappearance until some Astoria anglers in opening four bass they had caught discovered two ducklings in the stomach of one and one in each of the others. He also tells of catching a bass in the Tualatin river with a blackbird in its stomach and another with a snake 14 inches long.

But according to Haldeman, who is known to the thousands of Livestock show visitors as the game commission representative in charge of the most popular exhibit at the exposition, young carp provide the principal article of diet for our bass.

For many years he has been in charge of salvaging operations on Sauvie island. Every spring the Columbia and Willamette rivers flood the island. The spawning bass and croppies, as well as carp, are left stranded by the retreating waters in innumerable small lakes, which gradually dry up. It is then that a seining crew is put to work. Thousands of young fish are distributed to other parts of the state and the others are liberated in Willamette slough.

Haldeman says in recent years he has noted a constant decrease in the number of carp taken each season. In his opinion, this is due to the inroads made on the young fish by bass to the extent that fewer and fewer of the big trash fish babies grow to maturity. The take of adult carp in the seines is therefore less each year. This summer's catch was insignificant.

If there is any one thing that would delight the hearts of bass and croppie anglers as well as duck shooters it would be the complete elimination of the big German fish from waters of the Columbia and Willamette rivers. No real angler likes to catch a carp and this alien fish with its vegetarian appetite is blamed by the hunters for the almost complete extermination of the wapato—one of the finest of the natural duck foods. The game commission man says the carp are not only disappearing but that the wapatoes are coming back.

Lowly Worm Has Its Place As Human Aid

Few persons realize how important to human life are some of the most lowly and insignificant creatures. When Darwin was a student at Edinburgh he began his study of the common earth or angleworm. It was not until the year before he died that he published the results of his years of study. He had taken an acre of British soil and by careful measurements and excavations he found there was an average of 53,000 worms to the acre. Few know that these creatures consume large quantities of dead vegetable matter. This material is eaten and the castings that pass through the body of the worm are left on the surface or underneath.

Darwin's estimate was that the worms pass on this acre of land approximately 10 tons of earth through their bodies each year. In other words, they are plowing and turning the earth as the years go by. They are most numerous at the surface at night, as they are nocturnal and especially during and after a shower. In this way they drill the ground full of holes into which the water runs, permitting the oxygen of the air to penetrate the surface.

Worms have no eyes or ears but they are very sensitive to light. To a certain extent worms can regenerate themselves. When cut in two it often will regenerate the part that is missing. Every individual worm is both male and female. However, it is necessary for the individuals to pair, which takes place at night during the spring. When the worm is ready to lay eggs, there is a distinct little girdle around the body. This contains the fertilized eggs. This is worked forward over the head of the worm and discarded, forming a little capsule in which the young worms develop and finally burst out to take up their life in the earth.

A Common Scene on the Sandy River Years Ago



Here's a picture that was taken nearly 10 years ago on the Sandy river. Scenes like this were many before the channel of the stream and its mouth started filling up with sand. Big runs of smelt are rare nowadays and probably will be until the stream is dredged.