

MONTANA

Wildlife

VOL. III — NO. 2

Official Publication
Montana Fish and Game Department



EDITORIAL:

Along the byways and mountain trails at this time of year, the observant traveller will very likely see the wobbly, soft-pelaged offspring of Montana's wildlife species.

· These tiny animals are to be left strictly alone!

Deer and antelope fawns, cub bears, calf elk and moose, the downing goslings and ducklings and the soft-feathered chicks of the upland game birds that make their appearance in the spring months are not to be played with.

It is a natural, human tendency to want to pick them up and handle them—but don't pet or molest them. Many wildlife babies are left unattended by their mothers during the day.

But this does not mean that they are neglected nor are they lost!

They have been left in safe, concealed hiding places while the mother feeds, usually nearby. Finding a forlorn wildlife youngster alone does not mean that it has been deserted, for wild animals rarely abandon their young unless accident or tragedy prevent their return.

It is illegal to capture or molest young wild animals and may prove extremely dangerous. Female bears or moose will not hesitate to use their sharp hooves and claws in protecting their young. It is also often detrimental to these little creatures, for by handling them, their hiding place is disclosed to predators.

So—if you are fortunate enough to discover one of these wild-life youngsters—

Watch them at a distance—Take pictures of them if you wish—

BUT DO NOT TOUCH THEM!

MONTANA FISH AND GAME DEPARTMENT

Official



Publication

State of Montana

J. Hugo Aronson, Governor

MONTANA FISH AND GAME COMMISSION

Walter Banka, Chairman

William T. Sweet

Manson H. Bailey, Jr.

Ralph D. Shipley

H. W. Black



Robert H. Lambeth, Secretary



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The Commissioner's Message

Much of the pleasure of a day spent fishing comes from the mental and physical relation of getting outdoors in association with the things of nature. Such outdoor experiences tend to develop in the individual the characteristics that make good citizens.

This being true—and who would deny it—the fisherman has a responsibility to future generations of perpetuating this interest in outdoor activity.

Yet there are dozens of boys and girls even in this state who have never thrilled to the tug of a trout on their line—and there are hundreds more who have never been taught the fundamentals of good sportsmanship.

A definite challenge presents itself to every Montana fisherman to share his love and knowledge of the outdoors with some youngster.

Mr. Fisherman—if you would do your state a civic kindness and enrich your own experience in clean outdoor living—"Why Not Take A Kid Fishing?"

Walter Banka Chairman

Montana Wildlife

Vol. III

Marjorie Mitchell, Editor

No. 2

Vernon Craig, Artist

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Spring Issue — 1953

"Montana Wildlife," published quarterly, may be obtained free of charge by writing the Montana Fish and Game Department at Helena. Contents of this magazine may be reproduced in whole or in part if properly credited.

Our Cover

Mother Moose and her long-legged calf will probably spend the summer near their favorite habitat (a marsh or swamp) where they were photographed by Ken Thompson. In winter, they will feed on twigs and shrubbery, particularly willows.

A cow moose will produce one calf, usually in her third year, and thereafter twins are not uncommon for this species. The young are born in May or early June.

Moose are the largest member of the deer family and bulls will weigh from 900 to 1400 pounds. Montana's moose population is estimated at 4600 animals and between 100 and 200 are harvested each year by special permit.

PHOTO CREDITS

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Meet Your New Commissioners

With the expiration of the four-year appointments of Montana Fish and Game Commissioners Edward M. Boyes of Libby and Thomas S. Morgan of Miles City, Governor J. Hugo Aronson last month named H. W. Black of Polson and Ralph D. Shipley of Miles City as the two new members of Montana's five-man Fish and Game Commission. These two members will serve until 1957, assisting Commissioners Walter Banka of Conrad, William T. Sweet of Butte and Manson H. Bailey, Jr. of Glasgow.

By way of introduction to the new District Five representative, Mr. Shiplev may soon become known as the "Flying Commissioner," for he plans



Ralph D. Shipley

to pilot one of his own planes from Miles City to the monthly Helena meeting.

Although he was a commercial airlines pilot for four years, Mr. Shipley has been primarily engaged in the oil industry of Montana and Wyoming over the past twenty years. Currently, he is a distributor for a national tire company in Miles City and distributes oil and oil products for a large Montana oil firm.

Mr. Shipley was born at Huntington, Indiana, October 8, 1908, attended schools in North Dakota, is married and has three children. He has resided in Miles City for the past seven and one-half years where he is a member of the Miles City Club, Elks, Moose and the Custer County Rod and Gun Club.

His business experience plus a deep interest in eastern Montana's fish and game resources indicate that he will promote sound management principles in the counties of District Five and apply his private industry "know-how" where necessary to wildlife problems throughout the state.

In 1936, H. W. (Buck) Black chose to live in the center of western Montana's beautiful recreational playground. Since that time, he has become one of Polson's most active leaders in civic affairs and devotes much of his time to sportsmen's programs. He is a member of Polson Outdoors, Inc., an organization which has developed a public waterfowl shooting area near Pablo Reservoir as one of its outstanding projects.



H. W. Black

Mr. Black is also prominent in the north-western division of the Montana Wildlife Federation and is an ardent hunter and fisherman.

He was born in Grant County, South Dakota on October 21, 1904, is married and has four children. At present, he owns and operates a large hardware store at Polson.

He received his education in South Dakota and Minnesota and taught in South Dakota schools for seven years prior to moving to Polson. He is extremely interested in educational problems, particularly those of conservation education.

Mr. Black has served one term on the Polson School Board, is a past president of the Polson Rotary Club, a member of Masonic Lodge, Royal Arch Masons and Elks.

1953 Legislation Affecting Fish and Game

H. B. 15 — PARK COUNTY ELK SEASON

Repealed Section 26-311 which provided for legislative control of the setting of the Elk Season in Park County. Repeal of this section places authority with the Fish and Game Commission for setting the season on elk in Park County. (Effective January 28, 1953.)

H. B. 134 — RECODIFICATION OF FISH AND GAME LAWS

Sets up recoding committee of three, one from Senate, one from House and one member-at-large to be appointed by the Governor. The State Fish and Game Warden will be secretary for the committee and will furnish legal and stenographic assistance. Committee will recommend proposed legislative changes in the Fish and Game Laws to the 34th Legislative Assembly in 1955. (Governor J. Hugo Aronson appointed Representative R. H. Wiedman of Polson, Senator Don F. Valiton of Deer Lodge and John A. Willard of Helena to this committee on March 30. The first meeting was held April 2.)

H. B. 154 — ADDING BUFFALO OR BISON TO THE GAME ANIMAL LIST AND REMOVING RACCOON FROM GAME ANIMAL STATUS

Buffalo or Bison heretofore were not included on the Game Animal List, although a statute protected these animals. The raccoon was removed from Game Animal List so that this animal could be taken without a big game license and with dogs. The raccoon has become somewhat of a nuisance in some sections of the state and little interest has been shown in the raccoon as a game species in Montana. (Effective July 1, 1953.)

H. B. 155 — REPEAL OF LEGISLATIVE CONTROL OF FISHING ON THE MISSOURI, KOOTENAI, YELLOWSTONE RIVERS, ETC.

This bill repealed portions of paragraph 5 of Section 26-301 which limited power of the Commission to make regulations for catching fish in the Missouri, Kootenai, Yellowstone, Powder River and other designated waters. An amendment to paragraph 5 gives the Commission authority to designate waters where set lines may be used to take game or non-game fish. (Effective July 1, 1953.)

H. B. 164 — SPECIAL LICENSE AND SPECIAL GAME ANIMAL SEASONS

Consolidates in one bill provisions of statutes dealing with special big game seasons on deer, elk, antelope and moose. New provisions give Commission authority to issue special licenses for Buffalo (\$25.00), Mountain Sheep (\$15.00) and Mountain Goat (\$5.00). The fee for special licenses on deer and elk have been removed and only those who have not taken a deer or elk during regular season are eligible to receive special deer or elk permits. Also provides that a person who has received an antelope permit

cannot receive another permit during the same license year. Any person who has received a special moose, mountain sheep or buffalo permit is not eligible to re-apply for the same kind of permit for the next succeeding ten (10) years. Regular big game license prerequisite for any special permit. (Effective July 1, 1953.)

H. B. 177 — TOURIST FISHING LICENSE FEE AND TERM INCREASE

Provides for extending former three (3) day limited fishing license to a six (6) day period and increases the fee from \$2.50 to \$3.00. (Effective March 5, 1953.)

Senate Bills Enacted Into Law . . .

S. B. 67 — SPECIAL BOW AND ARROW SEASON ON DEER

Gives Commission authority to declare special areas open to hunting deer, which deer may be killed or hunted only with bow and arrow. Also provides for a special bow and arrow permit (\$2.00) which must be purchased in addition to regular big game license. Regular deer tag from big game license must be used if a deer is killed. (Effective July 1, 1953.)

S. B. 196 — PAYMENT TO COUNTIES IN LIEU OF TAXES

Amends present law whereby the Commission has been paying 5c per acre payment in lieu of taxes on winter game range lands to provide for payment on a regular assessment basis on the overall acreage. The lieu of tax payment will be no stipulated amount per acre but an amount equal to what the normal taxes would be if the lands belonged to an individual. (Effective March 4, 1953.)

S. B. 74 — PER DIEM OF FISH AND GAME COMMISSIONERS

Extends beyond June 30, 1953 provisions for paying a per diem of \$15.00 per day and actual expenses to each Commissioner while attending Commission meetings. (Effective July 1, 1953.)

S. B. 92 — OPEN SEASON ON BEAVER

Amends present beaver control law to provide that in addition to issuing beaver permits to land owners or lessees, the Commission may declare a general open season and set a bag limit on beaver wherever and whenever in its judgment it is deemed necessary to control the population. Public lands and private lands both may be opened to trapping by persons having a general trappers license but no trapping may be done on private lands without the trapper having received permission of the land owner. All beaver pelts are to be tagged the same as in the past. (Effective July 1, 1953.)

S. B. 98 — RESTRICTING SALE OF BIG GAME LICENSES TO CHILDREN

Prohibits the issuance of a big game license to any person under the age of twelve (12) years. Will automatically prevent children from hunting big game animals or applying for special limited game licenses. (Effective July 1, 1953.)

Other Bills Enacted Into Law . . .

(not directly State Fish and Game)

S. B. 151 — CREATION OF INTER-DEPARTMENTAL ADVISORY COUNCIL

Creates inter-departmental advisory council for the Governor on such matters as forestry, land management, state parks, fish and game projects, highway construction, water pollution, floods and any problems concerning natural resources. (Effective July 1, 1953.)

H. B. 358 — FEDERAL PROJECT APPROVAL

Authorizes the Federal Fish and Wildlife Service to acquire lands for a canal right-of-way to assure a supply of water, from Muddy Creek near Power, for Benton Lake Migratory Waterfowl Project north of Great Falls. (Effective July 1, 1953.)

H. B. 359 — FEDERAL PROJECT APPROVAL

Authorizes the Federal Fish and Wildlife Service to purchase a small acreage to construct pens in which bison and other game animals found on the National Bison Range at Moiese may be placed on exhibition near the highway.

Legislation Which Failed to Pass . . .

H. B. 59 — PERMITTING USE OF MOTOR VEHICLES FOR HUNTING

Would have allowed use of motor vehicles to gain advantageous positions for a hunter to shoot at game.

H. B. 60 — REGULATION OF ICE FISHING SHELTERS

Would have authorized the Commission to regulate the use of ice shelters for fishing through the ice in any area designated. The Commission would have been responsible for policing areas for removal of shelters from the ice at close of season.

H. B. 63 — PREFERENCE OF MONTANA RESIDENTS IN OBTAINING MOOSE PERMITS

Would have required the Commission to give preference to residents of Montana in issuing moose permits. Provisions would have made it impossible for a non-resident to obtain a moose permit in a drawing.

H. B. 153 — PUBLICATION OF ORDERS OF COMMISSION

Would have made the fishing regulation book, big game hunter's map and other publications announcing seasons official notifications to the public that such orders were duly promulgated by the Commission.

H. B. 176 — INCREASING LICENSE AGENT FEES

Would have increased the fee received by license agent from 10¢ to 15¢ for each license sold. Provisions would have decreased department revenue approximately \$16,000.00 per annum.

H. B. 297 — REGULATING HOURS FOR HUNTING

Hours for hunting game animals and game birds would have been set by law from sunrise to one hour after sundown. Would have conflicted with hours of shooting for migratory waterfowl set by Federal regulations.

H. B. 298 — PROHIBITING USE OF SPOTLIGHTS

The use of a spotlight by any person in an area containing game at the same time a loaded firearm is in possession or control would have been prima facie evidence of intent to take game illegally.

Senate Bills Killed . . .

S. B. 62 — LEGALIZING USE OF SALMON EGGS AS BAIT

This bill would have repealed the provision of Paragraph 7—Section 26-301 which prohibits possession, sale or use of salmon eggs for fish bait.

S. B. 122 — GIVING COUNTY 75% OF REVENUES FROM SPECIAL BIG GAME PERMITS

This bill if passed would have turned over to the County Treasurer 75% of the revenue derived from sale of special big game permits sold in each county. Its passage would have automatically disqualified Montana from receiving Federal Aid in Wildlife Restoration Funds.

S. B. 178 — ESTABLISHING CHECKING STATIONS

Provisions would have authorized Commission to set up checking stations for management purposes and failure of all hunters and fishermen to stop would constitute a misdemeanor. Would have strengthened present laws under which the department can establish checking stations.

Other Legislation Killed . . .

(not directly Fish and Game)

H. B. 115 — RESTRICTING APPROPRIATIONS OF MONIES FOR PREDATOR CONTROL

Would have restricted appropriation of money for predator control from general fund until all other sources of revenue had been provided for by livestock mill levies by counties.

H. B. 116 — CONTROLLING USE OF POISON FOR PREDATORS

Required persons authorized to put out poison for predators to cooperate with district Game Wardens, publication in newspapers location of poison stations, obtain written permission from landowners on whose land baits are placed and provide a penalty for violation of act.

S. B. 103 — CREATING A STATE WATER POLLUTION COUNCIL

Would have inaugurated a program of water resources development for municipal and industrial water supply, irrigation, fish and wildlife conservation and outdoor recreation, to provide a program in the public interest for prevention, abatement and control of water pollution.

S. B. 181 — REQUIRING LIFE JACKETS ON BOATS

Required one life jacket for each person riding in any boat on streams or lakes in the state.



Montana Sportsmen's Projects

(Fifth in a Series)

Thanks to a talented group of children, some of whom are shown above, many Montanans who might never have attended a lecture or program devoted to discussions on the conservation of natural resources, now have a working knowledge of this vital subject.

These children have "sold" sound conservation measures to audiences all over the state by cleverly including along with their top entertaining talents many of the basic principles of careful management and use of resources.

Another group of senior showmen, retired professionals and children over 15, also use their talents to sell conservation.

Profits obtained from the senior group are used primarily to pay the operating expenses of the Montana Conservation Council, a state-wide organization of individuals interested in the wisest use of the state's valuable natural resources. Its membership includes representatives of state and federal resource agencies, miners, stockmen, farmers, sportsmen, school teachers, students and many businessmen.

Funds received through the junior group go to promote conservation education classes and projects, to obtain guest speakers, to finance field trips for school age children and in preparing free conservation literature.

The children shown at left are part of a juvenile vaudeville group which was formed three years ago under the direction of Carolyn Madden, Executive Secretary of the Montana Conservation Council, to help finance conservation activities.

All of these youngsters are under 15 years of age and have won amateur contests in their sections of the state. In return for their talents, Carolyn Madden assists the children by arranging auditions for radio, television and even motion pictures.

During the summer months, busses furnished through courtesy of the Intermountain Transportation Company carry the young entertainers to city and country audiences throughout Montana. A small admission is charged for their show and a five-minute break midway in

the program informs the audience of how the proceeds are utilized.

As the entertainers travel from place to place to present their show, they are constantly observing and learning more about conservation. Mrs. Madden has installed a public address system in the busses and points out examples of over-grazing, erosion, contour plowing, strip cropping, stream pollution, wildlife habitat and cover and explains how each of these affects another.

These children are seeing conservation in actual operation and are doing an excellent job of promoting its message in hundreds of Montana communities. When they return to their homes after one of these trips, they are well qualified to continue informing friends of their own age the necessity of conservation.

Junior vaudeville members travel throughout Montana by bus to bring conservation messages through entertainment to rural and urban audiences. Proceeds from their shows help finance Montana conservation projects.





Trumpeter swans mate for life at the age of about four or five years. The above swans are on their way to the nesting grounds at Red Rock Lakes Refuge near Monida.

No Swan Song For The Trumpeter

by

Winston E. Banko

Refuge Manager—Red Rock Lakes Migratory Waterfowl Refuge

Long before white man landed on this Continent, trumpeter swans were abundantly distributed throughout most of the United States. Fossil remains have been identified from Maryland to the Mississippi Valley and also from Florida.

The large hollow leg bones were apparently used by the North American Indians in making implements as these relics have been uncovered at ancient village sites in the Midwest.

However, after the white man had commenced to populate this country and the West gradually became settled, trumpeter swans suffered the same fate as many other native wildlife species. The story of their destruction began when, because of their valuable plumage, they were killed wherever found.

The decimation continued with their inevitable molestation on the breeding grounds. This was followed by the drainage of their breeding marshes in order to make way for farmland so that by the turn of the century, few birds remained of the thousands which had existed before.

Thus, all across western North America, in Canada as well as in the United States, their destruction was wanton and nearly complete. One authority has written that between the years 1853 and 1877, the Hudson Bay Com-

pany sold a total of 17,671 swan skins, most of which were believed to be of this species.

In the early days trumpeters were common travelers in the Mississippi, Central and Pacific Flyways as they migrated to their wintering grounds in Louisiana, Texas and even into Mexico. Audubon has left us with his clear impressions of this great fowl as he encountered large migrating flocks in his wanderings on the Ohio and Mississippi Rivers prior to 1850.

However, for nearly 50 years after the turn of the century, these magnificent waterfowl remained perilously near extinction in the United States. As early as 1912, one of America's most eminent ornithologists, Edward Howe Forbush, was prompted to predict:

"The trumpeter has succumbed to incessant persecution in all parts of its range, and its total extinction is now only a matter of years."

For twenty years after Forbush's dismal prophecy, only a few breeding pairs, nesting on isolated lakes in the Yellowstone-Red Rock Lakes wilderness, kept alive hope for the species.

This historically interesting region, located in southwestern Montana and northwestern Wyoming, has apparently always been within the "home range" of the trumpeter swan. The Hayden Expedition collected a male trumpeter swan in the year 1856 in what is now Yellowstone National Park. A. C. Bent, a noted bird authority, states that in 1885 trum-

peter swans were killed and eaten for food in the Centennial Valley, Beaverhead County, Montana..

Also, according to numerous records the Flathead Valley in northwestern Montana was also a popular breeding area for these birds late in the 19th century and many were shot in that region, some as late as 1910.

RED ROCK LAKES REFUGE

In the early 1930's, the National Park Service, through the untiring efforts of George Wright and his associates, became active in an attempt to preserve these rarest of American waterfowl. Mainly through the efforts of Mr. Wright, J. N. "Ding" Darling, then Chief of the Bureau of Biological Survey, became interested in the plight of these noble birds, and made a personal investigation of the Red Rock Lakes near Yellowstone Park in 1934.

As a result, the 40,000-acre Red Rock Lakes Refuge was acquired in 1935.

During the years following establishment of this refuge, these magnificent birds have steadily increased to nearly 600 from the fewer than 100 scattered trumpeters in the entire United States during the early part of this century.

This sanctuary, administered by the U. S. Fish and Wildlife Service, is located in the high and isolated headwater reaches of the longest tributary to the Missouri River. Nearly 7,000 feet above sea level, the vast marshes of the Red Rock Lakes lie cupped in the east end of the Centennial Valley in southeastern Beaverhead County.

LIFE HISTORY

The trumpeter is the largest native waterfowl of North America. Mature specimens in good flesh have been known to weigh from 30 to 38 pounds, though the average would probably be nearer to 25 pounds. One authority states that of the seven living species of swans in the world, the trumpeter is the largest.

Studies of the trumpeter swan, initiated by the National Park Service and continued by the Fish and Wildlife Service at the Red Rock Lakes Refuge in an effort to discover their habits and aid their increase, have revealed a bird of exceptionally interesting behavior and characteristics.

Before winter has ended in the high, snow-bound mountain country, paired trumpeter swans begin to leave their wintering grounds along the Henry's Fork of the Snake River in Idaho, and elsewhere, to make the short flight back to their breeding marshes.

Even though the particular nesting lake may be still locked in the icy grip of winter, they usually establish themselves at the nearest suitable open water to wait the coming of spring. This may consume several weeks as the ever-stronger sun slowly relaxes the frozen surface of the ponds and streams until the ice begins to leave the lakes.

By this time, the pair has examined its nesting area in detail and perhaps selected the actual nest location.

If possible, the nest is located on a small island, or perhaps among the reeds where a natural moat might discourage prowling marauders. Often, however, the nest is placed on the shore line. Any feature above the general level of the wet marsh may be utilized as the nest foundation. This may be a beaver lodge, bog hummock, or more frequently, a muskrat house. In many instances, the nest of the preceding year is used, this structure being renovated to accommodate the current season's quota of eggs.

During the breeding season, until the young are nearly ready for flight, the pair of swans defends its nesting area vigorously against any encroachment by others of its kind. The cob, or male bird, apparently shoulders the burden of the defense although the pen, or female swan, also may assist.

Upon the approach of a strange swan, both the pen and cob commence to trumpet loudly

Awaiting the spring break-up, these trumpeter swans share their open water with other waterfowl. Many of these swans remain at the Red Rock Lakes Refuge the year round.



and at the same time raise their quivering wings in a warning gesture. If the strange bird approaches too closely, one or both of the defending pair immediately takes to the air and chases the intruder away. This may occur several times, as the outcast swan, perhaps a previous year's cygnet, attempts to find company.

Once the nesting site is selected, actual construction consumes only a few days. The nest itself is simply a mound of the dominant marsh vegetation of the vicinity piled into a sort of "haycock" and is not an elaborate affair.

Egg-laying usually commences the forepart of May and is normally complete by the middle of that month when incubation starts. Five eggs comprise an average clutch with an occasional nest containing seven or even eight eggs. The eggs are chalky white, from four to five inches long and about two and one-half inches in diameter.

The incubation period lasts about 35 days with most of the downy young appearing on the Red Rock Lakes marshes by the end of June. The parents are very attentive to the new arrivals and seldom allow their offspring to stray more than a few feet away during the first few weeks of life. The cygnets grow very rapidly, increasing from a weight of less than 8 ounces when hatched to about 15 pounds by the time flight age is reached.

After a period of several weeks in the fall devoted to the exercising of their wings, the young, gray cygnets are ready to make short flights over the marsh. Since a great amount of effort is required to lift their heavy bodies into the rarefied air of their high mountain habitat, the young birds invariably face into the wind when taking off.

With their great webbed feet propelling their body over the surface of the water, and their powerful wings making every exertion,

they finally become airborne and tuck their large webbed feet neatly under their tail feathers.

Usually they learn the lessons of flight none too early for winter rapidly replaces summer in the high Rockies. The trumpeter family appears to remain together through most of the first year as family groups are observed during the fall and winter until spring again approaches.

Since at least four or five years pass before trumpeter swans mate and breed, the immature birds usually spend the summer months flocked together on a large body of water. Here they are safe from molestation as they moult their large wing feathers, rendering them flightless for a time. During the autumn following this yearling moult, the immaculate white plumage usually associated with these birds is acquired.

The constantly increasing numbers of these magnificent native waterfowl testify that this species has been saved. The efforts made to prevent this rare bird from joining the silent ranks of the passenger pigeon and other extinct species are being well rewarded.

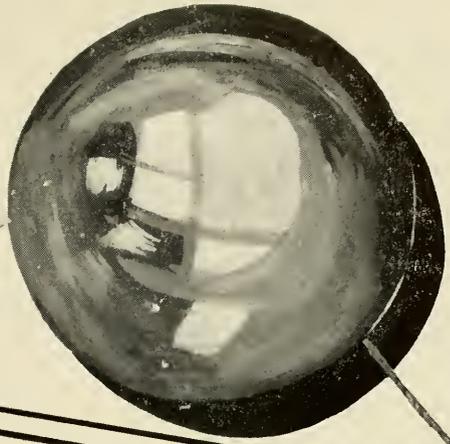
To observe the sustained and inspiring flight of this royal species as a flock cleaves the mountain air over the golden marsh, to listen to their melodious trumpet-call floating down through the quiet evening atmosphere, one may be inclined to agree with Audubon as he wrote over 100 years ago:

"Imagine, reader, that a flock of 50 swans are thus sporting before you, as they have more than once been in my sight, and you will feel, as I have felt, more happy and void of care than I can describe."

In these troubled times, when man's problems are numerous and complex, it is a credit to those actively interested in the wildlife of our country that such a noble species is being saved for the enjoyment of future generations.

An aerial view of a portion of the Red Rock Lakes Refuge shows the intricate pattern of the waterways where the trumpeter swans are making their dramatic come-back.





Gone fishin!

MAY • 1953

SUN	MON	TUE	WED	THU	FRI	SAT
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						



In the quiet back bays of Montana find a testy match for his skill with a king-size Mackinaw and other beauties.

The flash of a rainbow responds to almost every lake and stream that feeds the Yellowstone, Missouri, Kootenai and boast brown trout, whitefish, eastern own native cutthroat trout. The prized are concentrated for the most part in the headwaters and remote tributaries.

In Montana, the angler will find or beautiful irridescent-finned grayling. section of the state, particularly in the

For yellow perch, blue gill, bass, and of small water impoundments of eastern for these warm water fishes.

Whether the fisherman prefers the or the lazy roll of a boat on a lake—cold



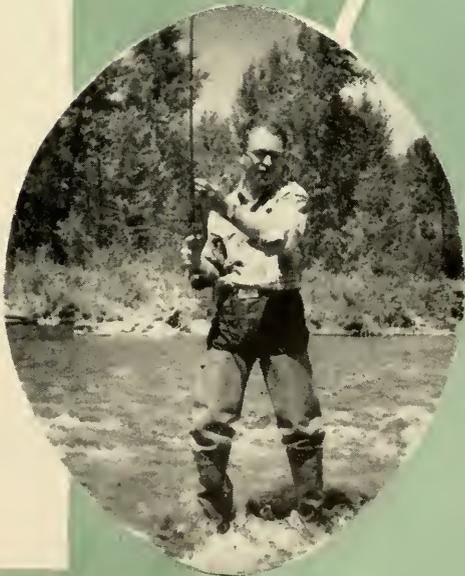
's mountain lakes, the angler will
and reel. Here he will find the
the trout family.

bright fly in the cold, clear waters
es Montana's four major watersheds:
r Columbia. These drainages also
ook, dolly varden and Montana's
ure strain of black spotted natives
northwestern portion of the state in
f the Kootenai and Columbia.

of the few remaining haunts of the
hese abound in the southwestern
adison and Jefferson drainages.

ish, pike and catfish—the hundreds
Montana are veritable storehouses

it, white water of the high country—
r warm water—MONTANA has it.



Montana Fishing Season

MAY 17, 1953 — NOVEMBER 15, 1953

Hours of Fishing: 5:00 a. m. to 9:30 p. m., Mountain
Standard Time (unless otherwise specified)

Brief reference to major changes in Montana's fishing regulations is given below as a quick check-list for fishermen. Sportsmen are cautioned, however, to consult the fishing regulations booklet which completely describes fishing procedures in each county. These are available free of charge at all license dealers. They may also be obtained from any deputy game warden in the field or by writing directly to the Montana Fish and Game Department in Helena.

EASTERN BROOK TROUT—The bag and possession limit for eastern brook trout in the Clark Fork of the Yellowstone River drainage shall be ten pounds and one fish. There will be no number or size limit within the weight limitation.

FISH FOR BAIT—It shall constitute a misdemeanor punishable by a fine of not less than \$25.00 or more than \$500.00 or imprisonment in the county jail for not more than six months, or by both such fine and imprisonment for any person to transport, possess and/or use for fish bait any whole non-game fish, dead or alive except as provided under county regulations. All waters of the state shall be closed to fishing with carp and goldfish, dead or alive, unless their heads have been removed. (This regulation shall not apply to non-game fish with their heads removed or to the use of sculpins (*Cottus*) for fish bait.)

BE A GOOD SPORT!

**LEAVE A CLEAN CAMP — DON'T WASTE GAME FISH
BE CONSIDERATE OF OTHER PEOPLE'S PROPERTY**

NON-RESIDENT FISHING — Out-of-state fishermen may now purchase a six-day fishing license for \$3.00. This replaces the three-day (\$2.50) limited fishing license.

Wilderness Areas -- Montana's Heritage

by **BOB COONEY**, Director, Wildlife Restoration

Automobiles have found their way to the end of every wagon road. From there, four-wheeled drive equipment has pushed on up open ridges and along horseback trails. Each year the whirl of the chain saw and the staccato bark of the bulldozer can be heard farther back into remote areas. Rivers, checked by dams, are flooding back into quiet mountain valleys. These are the inevitable results of man's expansion.

Montana, because of its geographic position, has been one of the last of the states to feel the heavy hand of civilization. It is here now—and there is little point in ignoring its progress with the hope that in some miraculous fashion Montana will receive all of the benefits of a stepped-up economy and miss the possible devastating results to its natural resources.

It is heartening, however, that through the years the blows of man's impact upon nature have been softened. Such things as sustained yield in the cropping of timber, multiple use of public lands, as well as the increased recognition of recreational values, are but a few.

One of the most pleasing to many conservation leaders has been the fact that the Forest Service, in its allocation of land use, has seen fit to set aside several blocks of remote mountainous back country as wilderness areas. Most of this was done during the middle and late thirties.

These tracts are to remain as bits of virgin land for all to enjoy. In this way it is now possible for future generations to see, if only on a small scale, some of the primitive country that played such an import-

ant part in shaping the lives and characters of their pioneer forefathers.

Even the word "wilderness" gives promise of respite from today's hurried and exacting world. Undoubtedly, there are many who will never hike or ride horseback through these remote regions but even to them, there is comfort in the thought that such places are allowed to exist. Surely these roots deep into the soil of the past are needed to give stability to the structure of the future.

It would be interesting to glance for a moment at these bits of Montana history that are now retained in the great museum of the out-of-doors.

The tracts larger than one hundred thousand acres have been termed wilderness, those under that size as wild areas.

Bob Marshall Wilderness 990,900 Acres

The Bob Marshall Wilderness area was established by the Secretary of Agriculture in 1940. It now represents a consolidation of the older Pentagon, South Fork and Sun River primitive areas. It is located along the Continental Divide south of Glacier Park and extends down

on both sides to include the headwaters of the South and Middle Forks of the Flathead and the Sun River.

Here are found the hearts of the summer range of three major elk herds and some of the finest back country fishing left in the West. Here, too, is one of the last strongholds of the black spotted native cutthroat trout, unaffected by artificial introductions. A favorite fishing spot is Needle Falls in the South Fork of the Flathead River pictured on page 21.

Unbelievable scenic beauty is highlighted by a vast escarpment known as the Chinese Wall formed by the huge Lewis overthrust, its height averaging about a thousand feet and in length extending over twenty miles along the Continental Divide with only three passes through which saddle stock can travel.

Anaconda-Pintlar Wilderness 145,000 Acres

This is a rugged section of the Continental Divide along the head-

waters of Rock Creek and branches of the Bitterroot and Big Hole Rivers. The region summers an important elk herd, and mountain goat frequent the alpine peaks. Deep mountain lakes here are famous for their fishing.

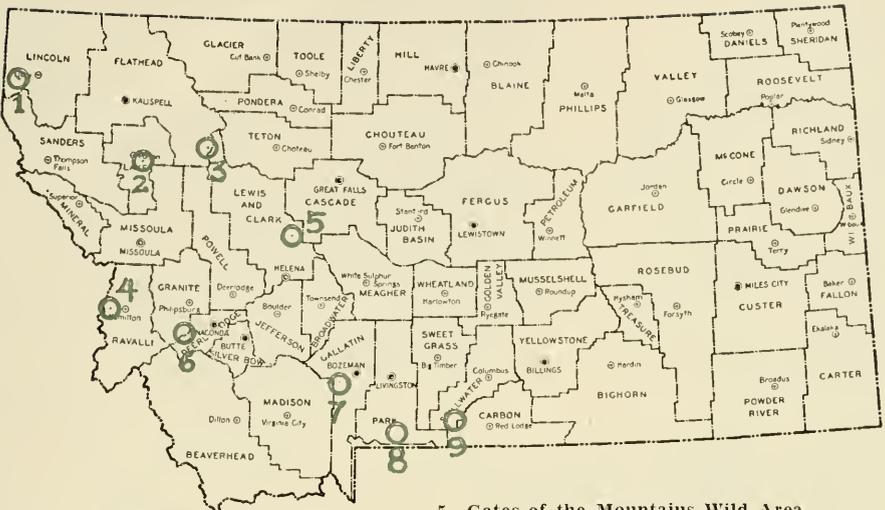
Beartooth Wilderness—230,000 Acres

A high glacier carved plateau-type range, this area includes Granite Peak, the highest point in Montana. Here, also, is the famed Grasshopper Glacier in which hundreds of thousands of grasshoppers were trapped by the glacier's movement and which may now be seen encased in the ice.

The area is located at the headwaters of the Stillwater and Rosebud Rivers and drained to the east by Rock Creek. A multitude of glacier-formed alpine lakes afford spectacular fishing. Mountain goats transplanted by the Fish and Game Department have added an additional big game species to the present elk, moose, deer, mountain sheep and bear.

For more than twenty miles along the Continental Divide, the Chinese Wall rises 1,000 feet. This beautiful natural rock formation is located in the Bob Marshall Wilderness.





1. Cabinet Mountains Wild Area
2. Mission Mountains Wild Area
3. Bob Marshall Wilderness
4. Selway-Bitterroot Wilderness

5. Gates of the Mountains Wild Area
6. Anaconda-Pintlar Wilderness
7. Spanish Peaks Wild Area
8. Absaroka Wild Area
9. Beartooth Mountains

**Selway-Bitterroot Wilderness
291,085 Acres (in Montana)**

Largest of the wilderness areas in the United States when the portion in Idaho is included, this area has a total acreage of 1,873,306 acres. That portion in Montana includes the Bitterroot Range along the Montana-Idaho divide. Steep-walled canyons and high rugged peaks make up a bulk of the terrain.

In these alpine formations are found some of Montana's finest mountain goat range. Elk from the Selway herd drift in and out of the state in this area and offer a sporty type of back country hunting.

Rapidly flowing mountain streams make for some of the best white water fishing in the state.

**Cabinet Mountains Wild Area
90,000 Acres**

This region of high peaks lying between the Kootenai and Clark Fork Rivers is in the western portion of

Montana. Glacier-formed lakes and mountain streams afford good fishing for the adventurous angler.

Big game, particularly deer, grizzly bear, mountain goats and mountain sheep are found in this area. It is one of the more difficult of these back country regions to traverse. Established trails are few. Thus traveling in its interior represents a real challenge to those who wish to enjoy this truly remote area.

**Mission Mountains Wild Area
75,500 Acres**

Spectacular glacial and snow fields above timberline characterize the Mission Wild Area which is located on the east slope of the Mission Range, within the Swan River drainage.

Mountain goats and grizzly bear find this high mountain region particularly to their liking. Fishing is excellent in these streams and mountain lakes.

Spanish Peaks Wild Area 50,000 Acres

This rugged region attains an elevation of eleven thousand feet in some places. It is located on the Gallatin-Madison Divide at the headwaters of Hellroaring, Spanish and Cascade Creeks. Moose are frequently seen along the stream bottoms and brushy snowslide areas.

Mountain goats have been introduced into this ideal alpine range and the high mountain lakes and streams provide excellent cold water fishing.

Absaroka Wild Area—64,000 Acres

Lying just north of Yellowstone National Park is this remote mountainous region. Access is gained by trail through several high passes leading from the headwaters of the Boulder River and also from the Stillwater River past Lake Abundance.

High divides must be crossed in entering this region from the west. These high trails are often blocked by early snow storms in the fall. Because of this, elk hunting has been allowed in this wilderness during the period beginning September 15. The area is also one of the few open to the hunting of buck deer at that earlier date.

The present and future benefits of such areas to wildlife, and the general recreational program of the state seem highly important to everyone interested in their preservation. It is very possible, however, that in the years to come, efforts will be made to encroach by roads, landing fields or water impoundments upon their present boundaries. In such event, it would be well to be prepared to defend vigorously these valuable natural areas.

Grizzly bear frequent the region, apparently drifting up from Yellowstone Park. This is one of the few areas in Montana where truly wild buffalo are found.

The numbers of elk in the area has been increased in recent years by a carefully carried out salting program along the high ridges. Wilderness-type fishing during the summer months is excellent in several lakes and in the mountain streams.

Gates of the Mountains Wild Area 28,562 Acres

The most recently created wilderness tract, the Gates of the Mountains, was established by the Chief of the Forest Service on March 25, 1948. It includes the picturesque limestone formations that lie immediately adjacent to a canyon waterway, deeply cut by the Missouri.

This region was first described in the Journals of Lewis and Clark. Indian writings on these rock walls present an interesting link with the past. Much of the area is closed to hunting in order that big game, particularly deer and bear, may be seen by visitors travelling the edge of the area by boat. More recently a plant of mountain goats has been made which adds another point of interest to be enjoyed by the many visitors to this region.





The Magpie...

It is a well-known fact that a magpie enjoys an occasional meal of pheasant eggs. This appetite has caused him to be considered by many to be a serious predator on pheasant populations and various methods have been used in attempting to eliminate this menace from the upland game bird areas.

These efforts have met with little success. The population may be reduced locally, but birds from adjacent areas quickly move in to take the place of those that have been killed. Bounty systems particularly have always proved to be both expensive and ineffective.

Let us consider the magpie as a predator in the light of some of the habits of pheasants and some basic principles of game management. Magpies do eat pheasant eggs, but possibly this habit is not as detrimental to the pheasant as might at first be supposed.

A hen pheasant, contrary to many opinions, does not go about raising a family in an effective and well-organized manner. A normal hen

drops her first eggs in a random fashion around the feeding and roosting areas. It is not uncommon for several hens to deposit eggs in a single "dump" nest and pheasant eggs may be found in the nests of other ground nesting species—possibly in the nests of mallards or other ducks.

A hen pheasant normally lays from ten to twelve eggs before she builds a nest and deposits eggs in it with the intention of incubating.

The random eggs, not being concealed in any way, are usually picked up by a predator. The sharp-eyed magpie gets his share.

The "dump" nests are often not well concealed and the eggs remain there until they are picked up by some roving animal with a taste for eggs. The magpie also comes in for his share of the contents of these abandoned nests.

Perhaps it is the shells from these eggs that contribute most to the piles of pheasant egg shells found in magpie roosting and feeding areas.

After the normal pre-nesting behavior, the hen that builds a well-concealed nest and incubates the eggs for the required time has a fair chance of successfully bringing off a brood. Ill-concealed nests and those that are deserted before the incubation period is complete have a poor chance or none at all.

That is probably how nature intended that it should be. There is a continual elimination of those members of a population that are the least fit to survive. The careless, flighty nesters are prevented from reproducing and the birds that are careful and persistent in their nesting habits continue to add their offspring to the existing population.

Selective breeding of domestic animals by man has produced many worthwhile changes—and selective breeding of animals by nature is also a continuing force in our wild populations. Man exerts a rigid control over his domestic stock and results are relatively quick in appearing. The controls of nature are less exacting and the process is slower, but the controls are there in the form of predators. Lack of these natural controls surely would have an unhealthy effect upon our wild populations in the generations to come.

The normal hen pheasant is a persistent re-nester. If her initial attempt fails, she will probably try a second or even a third time.

The fact that predation has a tendency to spread out the hatching dates of these birds has been heralded as an advantage by some. It has been stated that possibly a

short-lived animal like the pheasant owes its existence to a prolonged breeding season.

Adverse conditions that may decimate or eliminate a certain age group among the young birds would probably not be so severe on other age classes. Thus, a catastrophe may reduce the number of young birds that are alive at the end of a breeding season but some of the age groups will be able to survive.

This prolongation of the breeding season by destruction of some of the early nests is considered beneficial to the pheasants, in that a decimating factor will effect a smaller percentage of the population. The addition of some young birds to the population each breeding season is more assured.

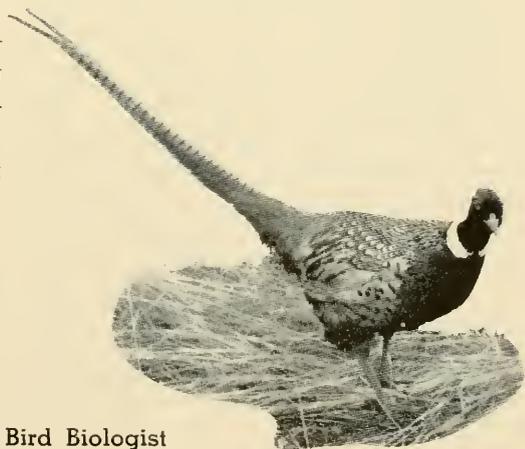
Biologists are forced to admit that the magpie may be doing some good through his ill deeds.

Until the role of the magpie is better understood in the complete upland game bird picture, extensive control measures are not sound.

and The Pheasant

by

Wes Woodgerd, Upland Game Bird Biologist



Rx The Fish Doctor



by

Jack Bailey, Fisheries Biologist

During the past year, Montana has used a portion of its Dingell-Johnson funds to support an investigational project on trout diseases and nutrition. Efforts were concentrated on the Arlee fish hatchery because of its record of annually recurring high mortalities among rainbow and cut-throat trout.

Losses at this station often ran as high as 90 percent of the total stock and were most severe when the fish were about 10 weeks old. The sick and dying fish consistently exhibited symptoms of bacterial gill disease (Davis, 1946).

Dying fish would swim weakly in a slow spiral coming to rest on the bottom of the trough or against the tail screen. The first noticeable symptom, however, was loss of appetite.

Microscopic examinations of the gills revealed the presence of considerable mucous laden with debris. Myxobacteria could be found in great abundance on the surfaces of the gill filaments as well as in certain internal organs. The gills were usually so swollen and congested that individual filaments were no longer recognizable.

At least two types of gill disease are known (Rucker et al 1952). One is characterized by the presence of myxobacteria, the other is a nutritional deficiency disease induced by an insufficient supply of pantothenic acid in the diet (Wolf 1945). Experiments with various diets including fresh beef liver and brewers yeast which are known to be rich in pantothenic acid failed to reduce the Arlee mortality rates.

Symptoms of bacterial gill disease clear up when the fish are treated with bacteria inhibiting chemicals such as P M A (pyridylmercuric acetate) and copper sulfate. Bacteriological investigations during 1952 demonstrated that the myxobacteria associated with gill disease are constantly present in the Arlee hatchery water supply.

This meant that chemical treatments would have to be started at an early stage in the development of the fish and continue at regular intervals until they would be strong enough to resist the disease without further aid.

Extensive tests with various chemical treatments and diet supplements were conducted. Of the prophylactics

tested, PMA was most effective in controlling bacterial gill disease. The addition of sulfamerazine to the diet of PMA treated trout resulted in further slight reductions in the mortality.

Mortality rates on experimental lots that succumbed to the disease often exceeded 90 percent during the first three or four months of the fish's life. By contrast, only 12 to 15 percent of these rainbow and cutthroat were lost during the same period when PMA and sulfa therapy was used.

Similar outbreaks of gill disease at two other state hatcheries were controlled effectively last year with PMA. It would seem that modern fish cultural methods are making it possible to rear an increasingly higher percentage of legal-size trout from any given lot of eggs.

This practice is justifiable on the basis of economics in that cheaper legal-sized fish are being produced for stream plants.

One question must be asked: How much will this product of chemical treatments, drugs and antibiotics contribute to the sportsmen's creel?

Miller (1952) found that 30 percent of the three-year-old hatchery trout and 50 percent of the two-year-olds died apparently from exhaustion within a period of about two weeks after planting in a mountain stream.

During the first 40 days in the stream the fish lost weight apparently through inability to compete for food with wild trout. Losses continued at a reduced rate and none of the two-year-olds were found the following

spring. Wild trout in the experimental-area were unaffected by the planted hatchery trout.

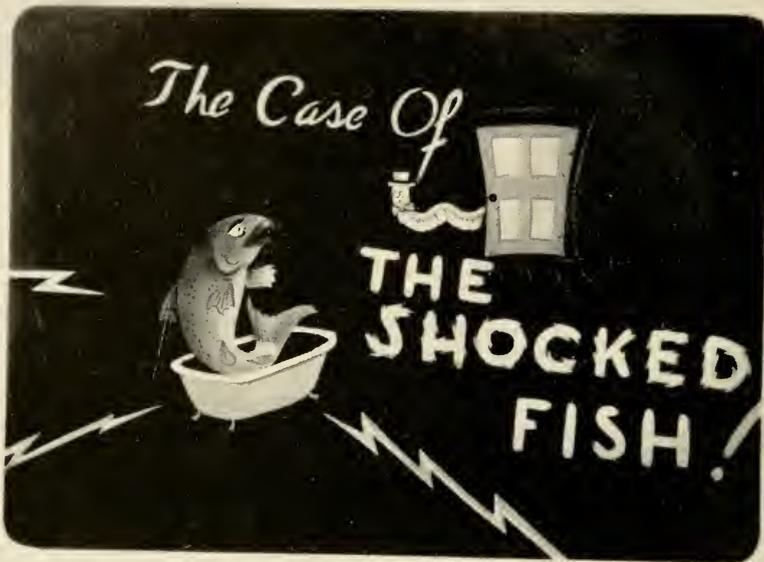
It may be postulated that a certain percentage of the fish from any given lot of eggs is genetically unfit to survive in mountain streams regardless of how they are handled in hatcheries. If this is true, then biologists should learn how to sort out the fish with high survival abilities and concentrate efforts on rearing them for stream planting programs rather than to indiscriminately attempt to rear every fish to planting size.

It may be, however, that the manner in which fish are handled in hatcheries has more effect on their ability or lack of ability to survive in the wild than does their genetic makeup.

In either case, the obvious approach to the problem is the use of a test stream in which hatchery fish, reared under a variety of conditions, can be planted for observations on survival ability.

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With the release next month of "The Case of the Shocked Fish," a twenty-minute sound and color motion picture, the Montana Fish and Game Commission inaugurates a new program which will provide sportsmen of the state with unusual documentary films of department activities.

This is the first in a series of low-cost movies which the department plans to produce from film footage taken by biologists and other technicians during actual field operations. Director of Education and Information Ken Thompson and his assistant, Vernon Craig, produced the script and sequence of the new motion picture.

The animated artistry of Vernon Craig (shown above) introduces the movie which was filmed to illustrate one of the most useful means of capturing fish for management studies—the electric shocking system. A step-by-step demonstration of "shocking" fish and the more important phases of a subsequent study is carefully recorded in this film.

The locale is primarily Prickley Pear Creek in the Helena Valley, where fisheries biologists have conducted their most intensive surveys of migration, growth and weight increases, longevity and species composition of the stream.

The movie will be previewed for Helena sportsmen next month and may soon be booked for sportsmen's meetings by writing the Montana Fish and Game Department in Helena



Rattlesnake Roundup

by

**William T. Sweet, Member
Montana Fish and Game Commission**

Please pass the rattlesnake meat.

Yes, I mean that white, flaky, delicious diamond-back rattlesnake meat served with mayonnaise. A dish fit for a king!

Strong, nourishing soup can be made from this meat also. The rattler is clean and eats nothing but live, warm-blooded food such as rabbits, squirrels, etc. The flesh ranges from white to pink, is flaky, contains no fat and possesses a flavor superior to the breast of quail.

Hunting rattlesnakes is our hobby and takes my wife and me to the great open spaces during April and the first part of May. Over the past twenty years, we have killed and captured more than 5,000 rattlers, mostly in the arid limestone sections of Beaverhead County. As we had a movie camera, we were very desirous of getting pictures which we have done with a lot of pleasure.

We have shipped many live snakes to zoos and sportsmen's clubs over the entire country and have a lot of fun experimenting with others after they have been captured.

We wear heavy boots and sometimes have actually pushed a foot close enough to touch their head without their striking. It is the quick movements that startle them and make them strike. They can only strike about two-thirds the length of their bodies.

As a remedy for snake bite, we usually carry safety razor blades and a suction pump. The poison glands are located in the head and have no connection with the carcass. Their fangs are two greatly elongated curved teeth at the front of the upper jaw through which the deadly venom is forced. The fangs are replaced at regular intervals even though broken.

(Continued on next page)

There are about 40 different species in the United States consisting of the small "side-winders" of the Imperial Valley to the large "Diamondback" of Florida and Texas which sometimes attain a length of eight feet and weigh fifteen pounds. All are very poisonous and the bites are fatal in many cases unless quick aid of the suction tube is administered.

A large rattler can puncture thin, flexible leather, so the principal danger is stepping on one. They always strike and poison their prey with their venom. Small animals quickly succumb and are eaten, usually head first.

Rattlesnakes belong to the family Crotalidae and have one rattle when born. This is lost with the first shedding of skin and the number of rattles is no indication of exact age. They thrive in semi-arid areas and particularly where rocky limestone formations are found.

They have been found in Mexico at elevations as high as 14,500 feet, in California at elevations of 11,000 feet, but in Montana, they are rarely found higher than 4,500 as the climate is more rigorous.

Rattlers are of considerable economic importance in many areas since they serve as a check on destructive rodents. They are largely nocturnal in summer. Rattlers hibernate together in large numbers and in colder climates, go into hibernation about mid-October, emerging in mid-April if the weather is warm.

We have found many bull snakes in the same dens with the rattlers but they do not inter-breed as bull snakes lay eggs whereas rattlesnakes produce their young alive.

These snakes are secretive and mild when approached. They will usually remain quiet in order to avoid detection and when discovered will endeavor to escape if possible. It is only when they are frightened and cornered that they stand their ground with a strident warning.

A big rattler, thoroughly alarmed, is certainly something to see and hear. Not only is the rattle sounded continuously, but the cornered snake inhales and exhales with a violent hiss, with body flattened. A large rattler can be clearly heard at a distance of approximately 100 feet.

Rattlesnakes mate in spring with broods varying from five to thirty, but usually averaging ten. Mortality among small rattlesnakes is high. Males can often be distinguished from females by their relatively thicker and longer tails.

So, if you want some real sport, something to take you out in God's Country while you are waiting for the fish to start biting, just head for their dens some warm spring morning when you can usually find 40 or 50 lying out in front sunning themselves.

But keep your distance. Give the rattler plenty of room and you will have no bad results. You will thoroughly enjoy the sport and a really rare taste treat.

An Open Letter to Sportsmen

STATE OF MONTANA FISH AND GAME CODIFICATION COMMITTEE

Chairman
State Representative R. H. Wiedman

Vice Chairman
State Senator Don Valiton

John A. Willard, Member

R. H. Lambeth, Secretary

All Montana Sportsmen's Clubs

Dear Sirs:

The State Fish and Game Law Codification Committee, which was set up by the 1953 Montana Legislature, has the duty of revising and recodifying the Montana Fish and Games Laws and presenting recommended revisions to the 1955 session of the Legislature.

The Committee wishes to invite all Montana sportsmen's clubs and interested organizations to submit their suggestions to the Committee Secretary, R. H. Lambeth, State Game Warden, Montana Fish and Game Department, Helena, Montana.

The Committee is restricted by statute to changes in laws only and cannot deal with administrative or executive matters, so please confine your suggestions to legal matters.

For easy reference and filing, the Committee asks that all recommendations be as brief as possible and be submitted in typed form by the secretary of each club.

Sincerely,

R. H. Wiedman, Chairman

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