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J.M. ROEVER

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Cover: Mr. Bass isn't going to give up easily. But some lucky fisherman has set the hook deep, and this lunker is soon going to be in a hot pan. Captured for this month's cover by Florida artist and wildlife painter J. M. Roever, largemouth bass are one of the real champs as far as Arizona fishing is concerned.

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Editorial:

WORLD-WIDE CONCERN for wildlife species threatened with extinction has been increasing rapidly in recent years. It is apparent that in some segments of society at least, there is developing a real and conscientious concern lest man's activities add even more species to the long list of those which have already vanished from the face of the earth. These people believe that every form of life has the right of existence, and that it would be arrogant indeed for mankind to cause more species to be lost, whether through callous design or careless indifference.

Much of what we know about evolution, adaptation, behavior and energy flows has been learned from animals. Information yet to be learned from some species of wildlife, or from some area with its natural vegetation and wildlife still intact, may unlock secrets which will hold great significance for the future of the human race.

All of this increasing interest in preventing rare forms of animal life from being pushed over the brink of extinction speaks well for our awakening sense of responsibility toward the other creatures which share the earth with us. And is it just possible that some of our increasing interest in the biology of extinction, concern itself not so much with *other* animals, but with the *human* species itself?

Might it be that the human population explosion, pollution in all its forms, and the rate at which we humans are using up or befouling the resources necessary for *our own survival*, account for part of the growing concern for threatened species?

THE COMMON FISHES OF THE SALT RIVER RESERVOIRS

Illustrations

Identification Key

W. L. MINCKLEY

JAMES E. JOHNSON

*DEPARTMENT OF ZOOLOGY
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TEMPE*

UNTIL THE creation of man-made lakes in Arizona and introduction of many kinds of fishes from more eastern waters, the fauna of the Salt River was relatively small and special. No more than 14 kinds of fishes occurred in the area of the Salt River lakes, a number of which were probably rare, prior to the white man's coming. As the exotic white man became more abundant, so did exotic fishes. About 40 species now have been recorded from the lakes.

The Salt River Reservoirs of central Arizona—Roosevelt, Apache, Canyon and Saguaro lakes—provide homes for fish populations virtually in the tens of thousands. Some species, such as bluegills and largemouth bass are familiar to nearly everyone. Many of the fish in the waters, however, are unknown to the average outdoorsman, and some fish species are undesirable, especially if transferred by people to other waters. Some fish are useful as sport, or as food, but may be ignored or discarded if their value is unknown by a person who sees or catches them. Some of the Salt River fishes are rare, unusual, or otherwise interesting to the scientist, conservationist or layman. Hence this article—an attempt to provide a simple means of identification of the commoner species of the area for the layman.

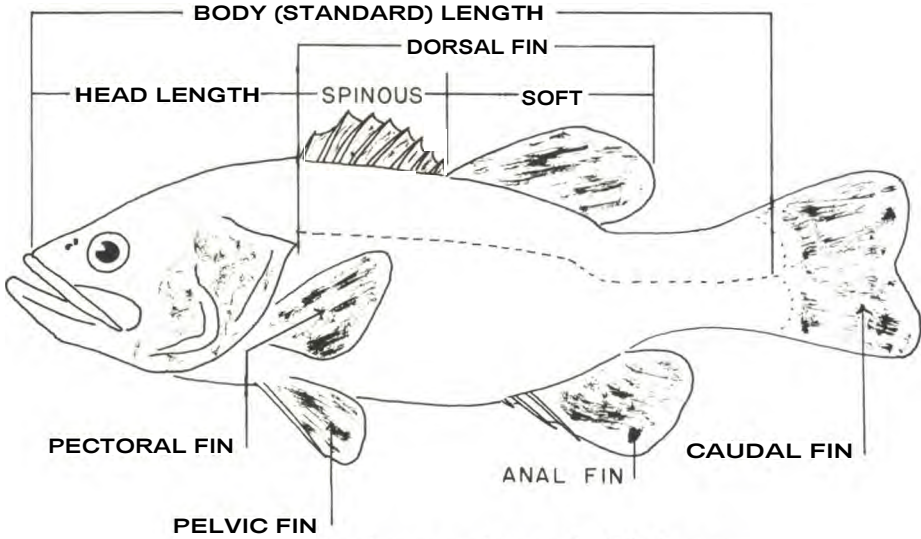
Identification of fishes is often difficult, especially when closely-related species are present together. A "key" is used to "unlock" the identity of a fish by its progressive description. We

have attempted to build a key that uses a minimum of characteristics and technical terms which, along with the illustrations, should allow accurate determination of what fish species is at hand.

Characteristics are presented in opposing pairs. In using the key, one should select the best alternative (the characteristics which fit the specimen to be identified best), then go to the next pair of numbers indicated. Following the key will progressively identify the fish. If the fish defies identification, you may have one of the less common species. The fish may be brought to the Game and Fish Department, or one of the state universities for identification. You may have caught something of more than passing interest.

Studies conducted at the lakes since 1963 have turned up examples of 27 of the 40 fish thought to be present in the waters. Of these 27 types, at least 24 are common enough in numbers to be at least occasionally seen by fishermen. These common inhabitants are included in the following key. The line below each fish illustration indicates one inch in length and is used as an adjustable scale to give an approximate size of each identified species, yet keep the drawings in line with the space limits of the magazine page.

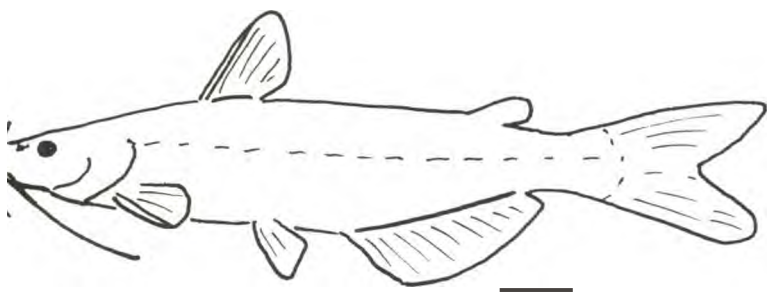
The first fish illustration at the top of page six identifies the basic parts of a fish and should be used in conjunction with the key.



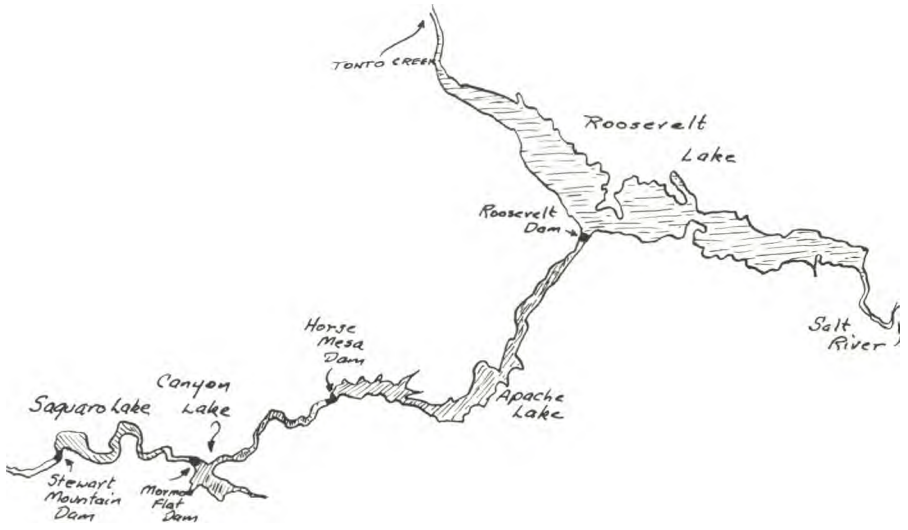
Shown in drawing above are main parts of a fish. These areas should be referred to for identification and use of key.

KEY TO COMMON SALT RIVER LAKE FISHES

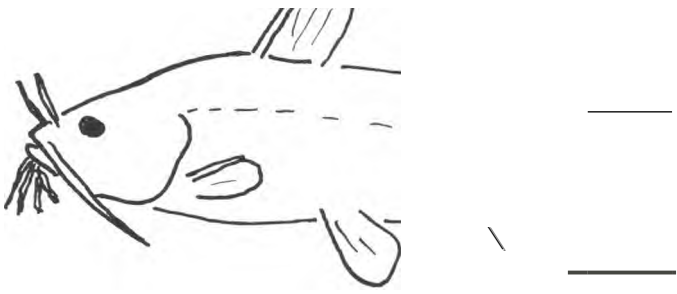
- 1. Dorsal fin soft, or with no more than one sharp-pointed spine at its leading edge 2
 Dorsal fin with a series of sharp-pointed spines 16
- 2. Body scaleless. Catfish family 3
 Body with scales 5
- 3. Tail fin deeply forked. Channel catfish (*Ictalurus punctatus*).



- Tail fin almost square, at most, slightly indented 4
- 4. Whiskers on lower jaw white or yellowish; anal fin long, with a square lower margin. Yellow bullhead (*Ictalurus natalis*). Figure top next column



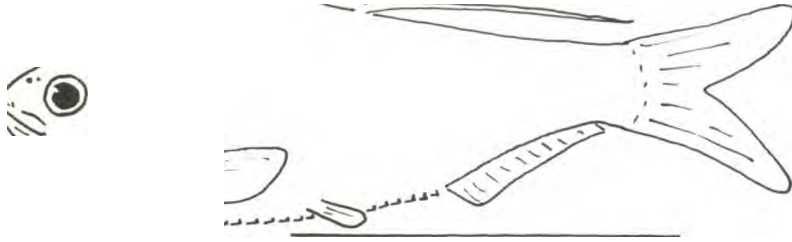
Central Arizona lakes of Salt River and their relationship to each other.



Whiskers on lower jaw dark; anal fin rounded on lower margin. Black bullhead (*Ictalurus melas*).



5. Belly with a sharp, saw-like keel; dorsal fin with last spine elongated and threadlike. Threadfin shad (*Dorosoma petenense*).



Belly rounded; last dorsal spine not elongated

6

6. Dorsal and anal fins with one sharp-pointed spine at leading margins. Minnow family (in part)

8

Dorsal and anal fins without sharp-pointed spines

7

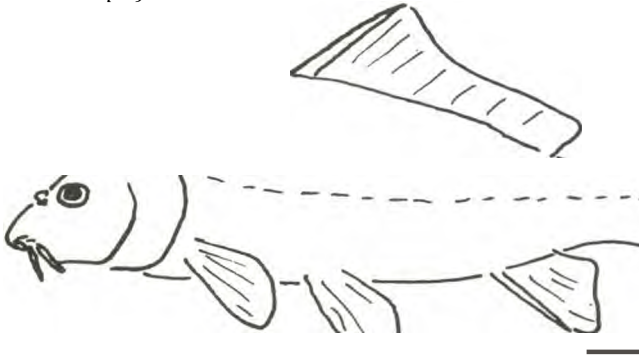
7. Lips thin, never with ridges or grooves; front of anal fin between $\frac{1}{2}$ and $\frac{2}{3}$ distance back from snout to base of tail fin. Minnow family (in part)

9

Lips thickened, usually with ridges or grooves; anal fin $\frac{3}{4}$ or more of distance back from snout to base of tail fin. Sucker family

12

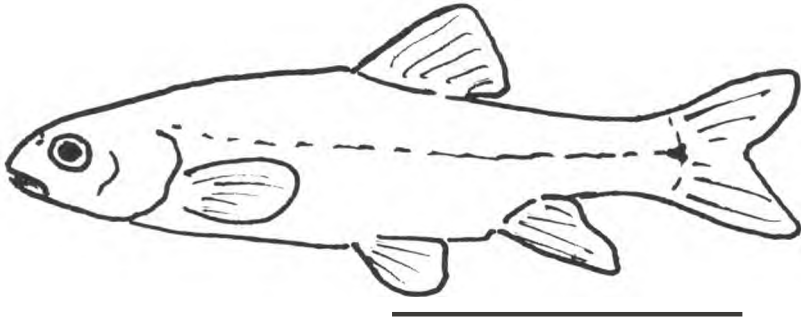
8. Upper jaw with two fleshy whiskers on each side. Carp (*Cyprinus carpio*).



Upper jaw lacking whiskers. Goldfish (*Carassius auratus*).



Scales small; body dark on back. Longfin dace (*Agosia chrysogaster*).

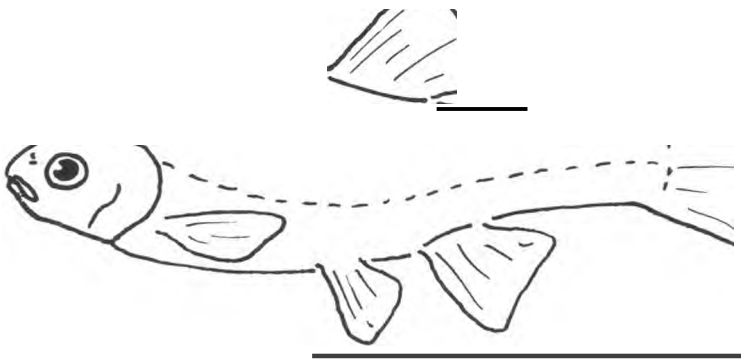


- 9. Scales large, obvious to the naked eye; body color on back usually light..... 10
- 10. Belly between pelvic fins and anal fin has a fleshy, naked keel. Golden shiner (*Notemigonus crysoleucus*).



Belly rounded and scaled over-all 11

- 11. Nose sharp-pointed; body narrow and deep. Red shiner (*Notropis lutrensis*).



Nose blunt; body rounded. Fathead minnow (*Pimephales promelas*).



- 12. Dorsal fin short, base of fin shorter than head 13
Dorsal fin long, base of fin much longer than head 14
- 13. Scales in front of dorsal fin abruptly larger than those on sides; mouth wide, with a hard ridge inside lips. Gila sucker (*Pantosteus clarki*).



Scales in front of dorsal fin similar in size to those on sides; mouth smaller, fleshy, without hard ridges. Sonora sucker (*Catostomus insignis*).



- 14. Mouth at end of head, lips thin; head large and rounded. Bigmouth buffalofish (*Ictiobus cyprinellus*).





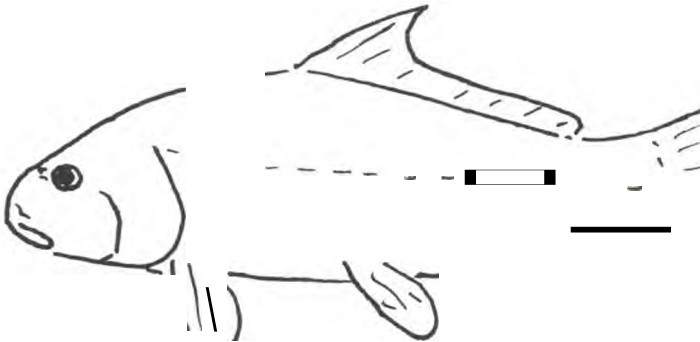
Mouth on bottom of head, lips thick and grooved; head smaller and much higher than wide

15

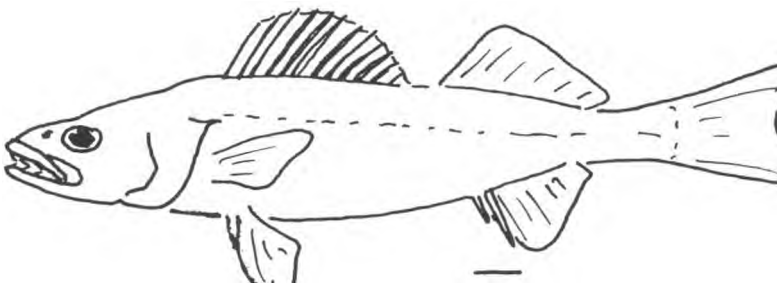
15. Body light; mouth on bottom of head and small, length of mouth (straight line, from tip to back) shorter or only slightly longer than eye length. Smallmouth buffalofish (*Ictiobus bubalus*).



Body dark; mouth on bottom of head and larger, length of lips much longer than eye. Black buffalofish (*Ictiobus niger*).



16. Two spines in anal fin; jaws with long, recurved, canine teeth. Walleye (*Stizostedion vitreum*).

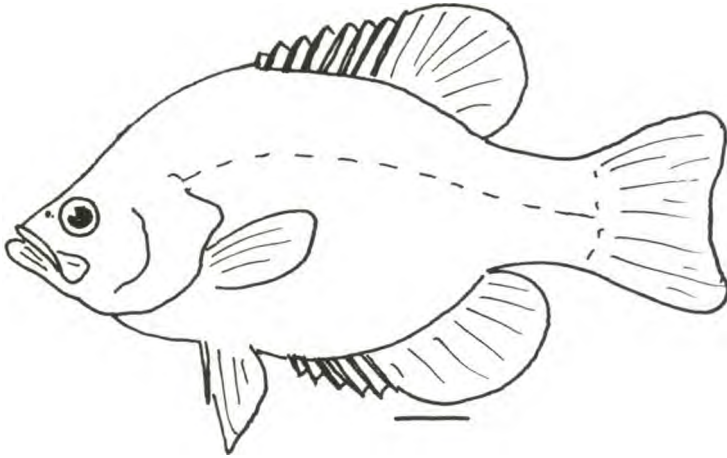


More than two spines in anal fin; jaws lacking long teeth

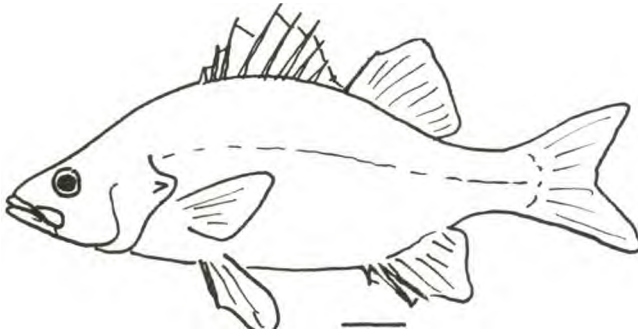
17

17. Six anal spines. Black crappie (*Pomoxis nigromaculatus*).

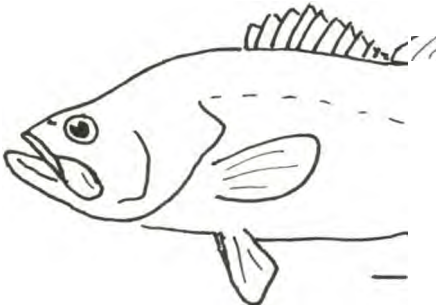
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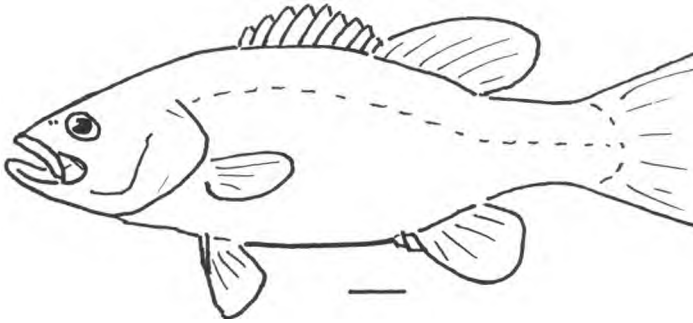
- Three anal spines 18
18. Color light yellow or silvery, with narrow, longitudinal, dark stripes.
Yellow bass (*Roccus mississippiensis*).



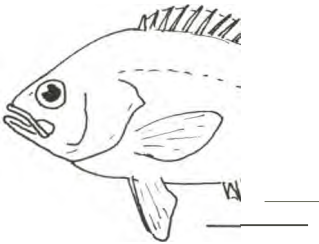
- Color darker, lateral stripes, if present, not as above 19
19. Body long and thick, depth of adult no more than $\frac{1}{3}$ body length 20
Body short, narrow and deep, depth of adult usually $\frac{1}{4}$ to $\frac{1}{2}$ body
depth 21
20. Upper jaw extending back past rear margin of eye; dorsal fin deeply
notched. Largemouth bass (*Micropterus salmoides*).



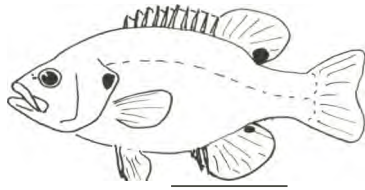
Upper jaw not extending past back of eye; dorsal fin not deeply notched, almost continuous. Smallmouth bass (*Micropterus dolomieu*).



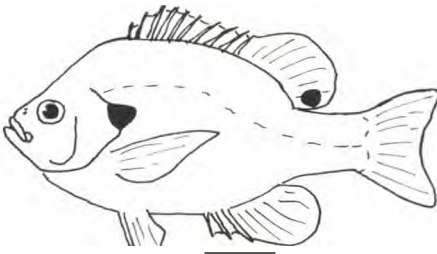
- | | | |
|-----|--|----|
| 21. | Teeth present on tongue; eye reddish in life. Warmouth (<i>Chaenobryttus gulosus</i>). | |
| | Tongue smooth; eye not reddish | 22 |
| 22. | Pectoral fin short and rounded, mouth relatively large. Green sunfish (<i>Lepomis cyanellus</i>). | |
| | Pectoral fin long and sharp-pointed; mouth small | 23 |
| 23. | Dorsal fin with a distinct, dark spot at rear margin; ear flap green or blue. Bluegill (<i>Lepomis macrochirus</i>). | |
| | Dorsal fin without a dark spot; ear flap red or orange. Redear sunfish (<i>Lepomis microlophus</i>). | |



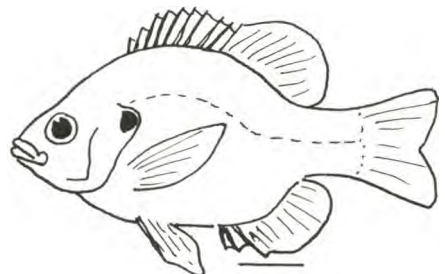
Warmouth



Green Sunfish



Bluegill



Redear Sunfish

THE PRESCOTT LAKES

Lynx
Granite Basin
Watson-Willow

BOB SCHIMMEL

EDITOR

THE mile high city of Prescott, Arizona (founded in 1864), is situated at the northern edge of the largest Ponderosa Pine forest in the world and on once gold laden Granite Creek. The past capital of Arizona is located about 50 miles west of the geographical center of the Grand Canyon State. Its claim to fame as a haven for asthmatics is world known, but the vastness of the Prescott National Forest which lies generally to the south and west of this western flavored city is increasing in interest for recreational purposes each year. Four fishing lakes and several new camping areas are within only a few miles of the center of the city with additional recreation facilities and roads.

One has only to drive through Prescott to witness the western informality

of the area, but finding the mentioned lakes and natural spots can be quite a problem since recent maps of the area are non-existent. The map on page 16 and 17 shows some of the more popular locations near Prescott in an effort to acquaint newcomers to the state, and older residents alike, to the opportunities Arizona offers, if you only know where to look for them. The map is, of course, general, but it will give a place from which to start your exploration.

Lynx Lake is probably the most popular of the four Prescott waters, and the most developed as far as convenience facilities are concerned. A new road is under construction to this regularly stocked trout fishery, and final paving of the surface should be completed by June 1st of this year. A



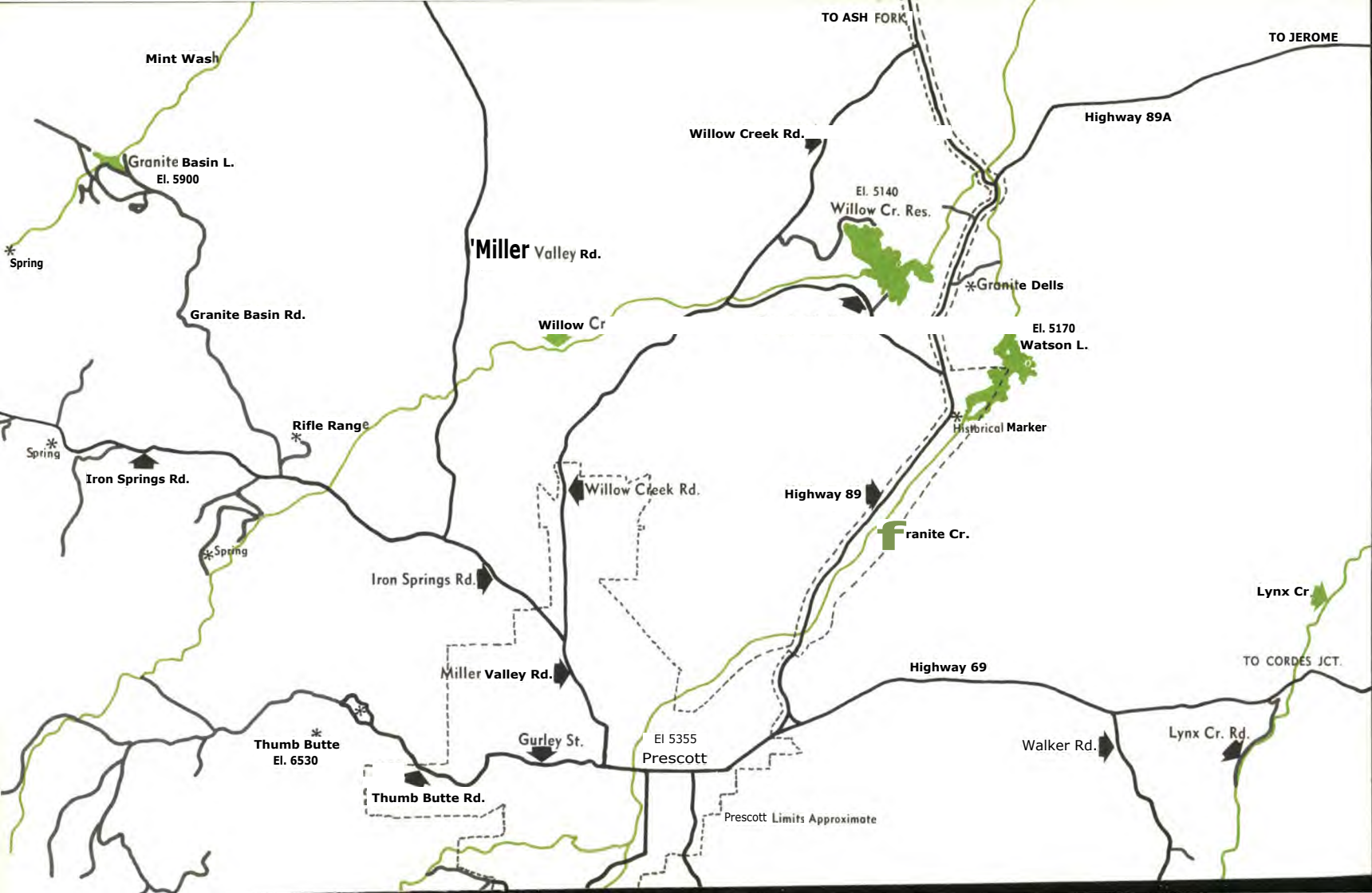
Granite Basin Lake northwest of Prescott. Many trails and relatively flat landscape make this small lake popular.

large picnic-camping area was completed last year and another site called "Hilltop" is now being put together. Interior roads of these camping areas, including a large boat launch area and access road which follows Lynx Creek several miles, are planned for paving by the Forest Service in the near future.

The lake was constructed by the Game and Fish Department in 1962 and Lynx Creek to which it owes its name, was so called by the early pioneer, Sam Miller. The story goes that in May 1863, a five-member expedition to prospect the interior of the state entered the area. While the four other members of the group hunted, Miller washed a pan of dirt and accidentally found gold. On May 19th of the same year, a mining district was formed on

the creek which was called by the Indians the Ookilsipava River. Shortly afterward, the same Miller was walking the creek and found a lynx. When he leaned down to pick it up, the animal sprang on him tearing his arm. Sam threw the cat down on the ground and kicked it to death, and so today's name.

Granite Basin Lake is a small impoundment northwest of the city of Prescott. To find it you travel west through town to the Miller Valley Road. Turn north on Miller Valley to the Iron Springs Road and then follow Iron Springs to the Granite Basin sign. The recreation area is about three miles up a gravel road in low-lying granite hills. Large picnic area, playground equipment for the children, camping, horse trails, and warm-water



Mint Wash

Granite Basin L.
El. 5900

* Spring

Granite Basin Rd.

Miller Valley Rd.

Willow Creek Rd.

El. 5140
Willow Cr. Res.

Highway 89A

* Granite Dells

El. 5170
Watson L.

* Historical Marker

* Spring

Rifle Range

Iron Springs Rd.

Willow Cr

Highway 89

Willow Creek Rd.

Granite Cr.

* Spring

Iron Springs Rd.

Lynx Cr.

TO CORDES JCT.

Miller Valley Rd.

Highway 69

*
Thumb Butte
El. 6530

Gurley St.

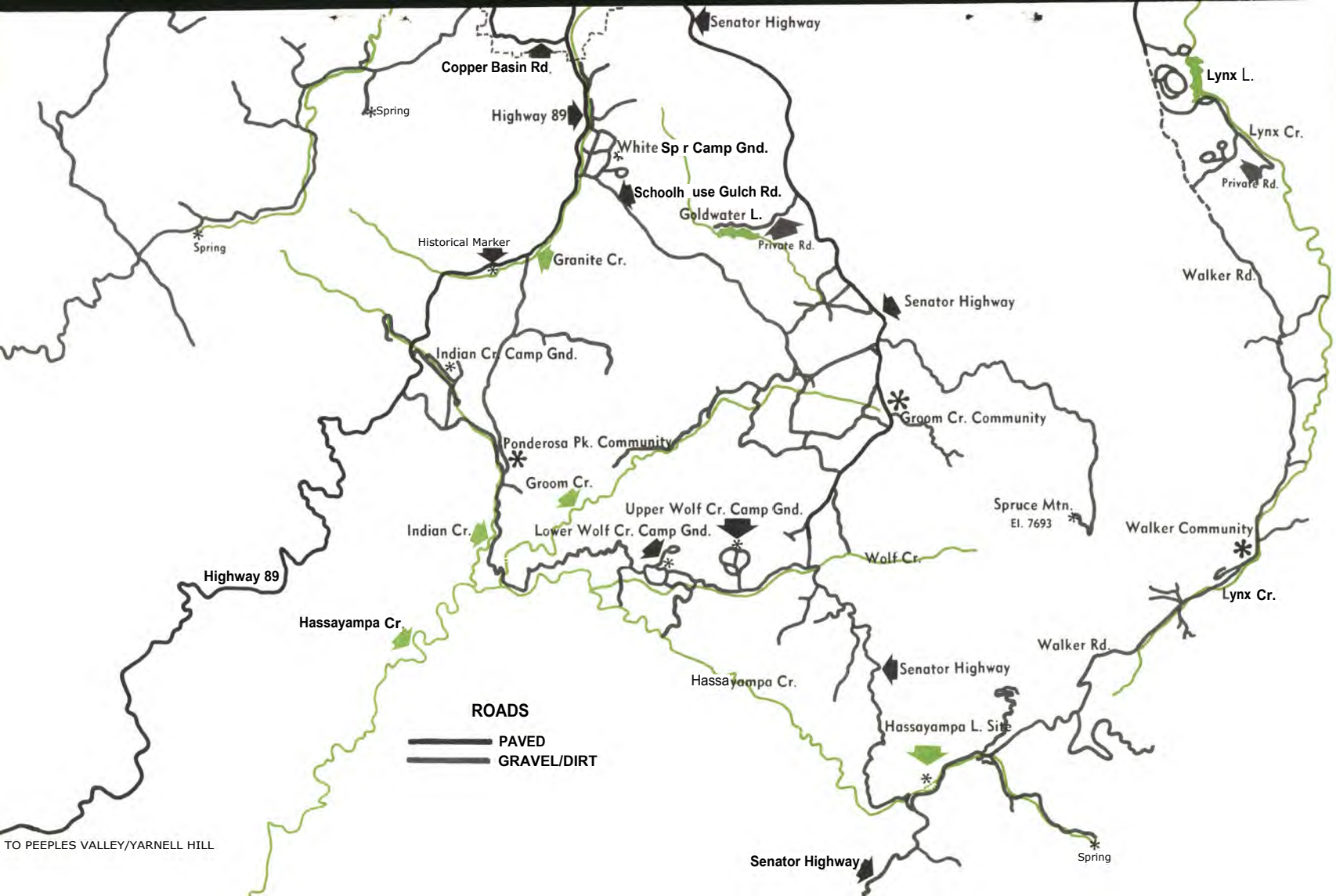
El 5355
Prescott

Walker Rd.

Lynx Cr. Rd.

Thumb Butte Rd.

Prescott Limits Approximate



TO PEEPLES VALLEY/YARNELL HILL

fishing are the main attractions of this pine-oak studded spot. The gently sloping terrain surrounding the lake site makes hiking a favorite pastime and the absence of cacti keep the children fairly happy. The main camping area is closed each winter and opens in the spring, usually April 15th. The new Prescott Sportsman's Club Rifle Range can also be reached from Granite Basin Road. A full-time caretaker is at the range with signs directing your approach.

Watson Lake is on Granite Creek north from Prescott on Highway 89. The lake is on the east side of the road with access at the "Prescott" historical marker. The lake has warm-water species in it, but is not fished to much extent. There is a private, fee camping area on the north end of the impoundment. Watson was named for James W. Watson, a senator from Indiana who was president of the Arizona Land and Irrigation Company in 1916.

The fourth lake is Willow. It is found north of the city and can be reached by going north on Highway 89 and turning west on Granite Dells Road which intersects 89 at the top of the hill adjacent Watson Lake. Another way to get to Willow Lake is by taking the Miller Valley Road north to Willow Creek Road which begins at the Iron Springs Road junction. Follow the Willow Creek Road northeast out of Prescott (see map). Willow Lake is part of a large city park and access to the water is either on Granite Dells Road, or on Willow Creek Road at the electric power station. Turn left *immediately upon crossing the cattle guard* when entering the power station and follow the dirt track around to the left and behind the electrical station. Boat access is only on the Granite Dells Road, however.

The rock formations surrounding both Willow and Watson lakes have been carved by the forces of nature. This area called Granite Dells was once known as "Point of Rocks." In the early days these picturesque formations made a dangerous spot because the area was perfect for Indian attacks. The mail rider was frequently attacked as

he rode through the area. Although most of the land is now privately owned, there are several short roads which lead to interesting rock displays, all of which can be reached with a standard automobile.

There used to be a trout lake south on the Senator Highway past the community of Groom Creek. The water, called Hassayampa Lake, was on Hassayampa Creek, headwaters for the river of the same name which flows through present-day Wickenburg and into the Gila River southwest of Buckeye. This small, man-made impoundment was drained in 1963. The high concrete dam is still standing today, but prospects of re-instating the water are not good since the feeder stream has been transformed into a polluted, putrid, scum-filled stream by improper land use higher up into the watershed. There are still a few picnic tables, placed in the area many years ago by the city of Prescott.

The Goldwater Lakes, which supply Prescott with its water, are closed to travel or fishing. This municipal water supply was built in 1933 and covers approximately 35 acres. Both lakes were named for Morris Goldwater, a prominent citizen and one-time mayor of Prescott. The map also shows the more developed picnic and camping developments within the limit of the indicated map area.

Thumb Butte Picnic Ground is west of Prescott just outside the city limits. It is at the end of paved Thumb Butte Road which is a connection to Gurley Street. The picnic area is within the forest boundary.

Upper and Lower Wolf Creek Forest Campgrounds are supplied with a limited number of picnic tables and many camping spaces. A water pump is available. Indian Creek Forest Camp has two water pumps, picnic tables, and spreads out along both sides of the usually dry waterway which runs parallel to the dirt road. Wolf Creek and Indian Creek areas are both timbered.

White Spar Campground also has facilities for picnicking and can be reached from paved Highway 89 out from Prescott.



Above: Lynx Lake has become popular trout fishery and summer camping area. Below: Scenic view of Willow Lake and famed Granite Dells rocky area.



GILA MONSTER

(HELODERMA SUSPECTUM)



RANGE: The Gila monster is found throughout the warmer western and southern portions of Arizona. It also occurs in Utah, Nevada and northern Old Mexico.

DESCRIPTION: Clumsy looking, blunt-headed, stocky lizard. The body scales look like beads, and this, together with the color pattern of variegated light yellow, orange or salmon-pink

DICK TODD

NON-GAME BIOLOGIST

mixed with black, give the monster a unique and distinctive appearance. The Gila monster is one of only two lizards known for sure to be poisonous. The other, the Mexican beaded lizard (*H. horridum*) is found primarily in western Mexico. Chewing helps spread the monster's poison by capillary action along three or four grooved front teeth. Unlike poisonous snakes, there is no duct connection between the teeth and the specialized mucous glands which produce the poison. The poison may be a type that affects the nervous system similar to the poison of the coral snake, but actual effects on people, at least, are in debate. The rotund tail, which serves as a fat storage organ, is equal to one-third or one-half of the body length. The largest total length on record for the Gila monster is 24 inches.

HABITAT: Wide valleys and broad canyons of desert mountain areas generally at elevations below 4,500 feet are called home. The moisture of cultivated fields holds some attraction and it can also be found under rocks and in dry desert flats. The animal usually uses mammal burrows as a retreat and is believed to be a good digger.



Camouflage-type coloration helps hide Gila Monster from friends and enemies alike.

HABITS: The big lizard can be encountered at any time of the day, but it is usually most active during the evening hours. The monster's locomotion is slow and awkward compared with most lizards found in Arizona. This slowness seems to complicate food getting. The animal can, however, snap its head sideways *very* quickly in attempting to bite. Once having bitten a particular target it can hang on tightly, chewing slowly in a grinding motion working the poison into the wound. Although this is a desert creature, it shows a strong liking for water, and if deprived of it, the animal will die. The Gila monster occasionally sleeps on its back, with the legs widely spread.

FOODS: Little scientific information is available and very few detailed studies have ever been made about this country's only poisonous lizard. Foods are believed to include reptile and bird eggs, nestling birds, small rodents, rabbits, and probably other lizards when they can be caught.

REPRODUCTION: The female lays from five to 13 eggs in moist sand and preferably in a sunny location. Four-inch young emerge about one month later from the eggs. Sometimes the similarly shaped little ground gecko lizard is mistaken for a "baby" Gila monster. Geckoes, however, lack the "beady" scales and are much quicker moving. Little of the everyday life of the monsters is known. The life span in the wild is unknown, but one captive monster lived in a zoo for more than 19 years. Length of life for an animal is generally longer when in captivity.

ECONOMIC IMPORTANCE: In years past the collecting and selling of live and stuffed Gila monsters in Arizona threatened these interesting reptiles with extinction. The animals are now fully protected by law and may not be possessed, purchased, or molested at any time. The monsters pose little danger to humans if left alone when encountered.

LAKE MOHAVE TROUT TEST NEW TAGGING TECHNIQUE

WES MARTIN

REGIONAL SUPERVISOR
KINGMAN

FISH MARKING has, in the past, proven to be a very fine tool of Fisheries Management. It particularly lends itself in the determination of "percent return" of total stocked fish, which is of primary importance since a great deal of money is expended on stocking programs in Arizona. If the percent return is not high, then we may be spending more money than we should. In order to obtain a higher percentage return, we often vary stocking procedures, and fish marking will tell us if we have increased or decreased the return to fishermen.

Fish marking also gives valuable information concerning movements and growth rates of fish to help determine levels and methods of stocking. For instance, if we find that growth is not good, then we may have stocked too many fish. Determining fish movements is important when we

try to figure *what areas* to plant and *how* many fish to plant in each area. We may find that fish do not disperse in a particular lake, thus give good fishing in the area of the stocking, but not in the rest of the lake. We would then try to distribute the fish to a larger number of areas, with fewer fish in each plant. On the other hand, we may find that the fish disperse even if we stock at only one place.

In the past we have marked trout in Lake Mohave, a body of water 67 miles long. We have tried fin-clipping, a technique which cuts a certain fin on trout, according to when they were released, but this has proven to be very time-consuming and expensive. We also had the problem that fishermen did not recognize the marking and thus failed to report it.

Another method tried was the use of metal jaw tags. Fishermen recog-



Above: Willow Beach on upper Lake Mohave. Its facilities produce millions of fish. Below: Kingman Wildlife Managers Terry Landrith and Gary Edwards herd trout into smaller area for capture and tagging.





New tagging device is compact and faster than previous jaw or fin clipping methods.

nized these tags and did report them. *Tagging* in this manner is time-consuming, expensive and probably detrimental to the fish.

Early last year a new technique came to our attention. It consisted of inserting a nylon streamer into the body of the fish to be marked. Once inserted, a portion of the streamer protrudes from the body and allows ready identification. These streamers come in various sizes, shapes and colors and may have different types of fastening tips. The combinations of different types of tags tell us when and where the fish were planted. The new tags are also lower in cost: only about \$2.50 per thousand. This is quite significant, considering that most other tags cost from \$8-\$15 per thousand.

The application of this new plastic tag is also simple and quick. It is done with a small "gun" which inserts the anchor portion of the tag under the skin. When the needle of the "gun" is removed, the anchor unfolds preventing removal of the tag. The tags are available in cartridges of thirty-five. A cartridge is inserted into the "gun," and 35 fish can be tagged in short order. The reloading operation takes only a few seconds and another 35 more fish can be tagged.

To give an idea of the speed of

the operation, in a two-day period, three of the Region III men tagged 18,000 trout. This is at least *twice* as fast as any other previously used marking technique by the Department. Since the new tags were put into use in June 1967, 41,000 tagged fish have been released in Lake Mohave on the Upper Colorado River. It appears that the percentage of tag returns is going to be much higher and much better than with any of our previous tag types. Some of you might be thinking that 41,000 tagged fish is quite a lot, but it isn't! The figure represents only 8.3 percent of the *total trout stocked* in Lake Mohave in 1967 and so far in 1968.

All of the approximately 410,000 fish stocked in the lake during 1967 were produced by the Willow Beach National Fish Hatchery, located 15 miles below Hoover Dam. This tagging program being done by the Arizona Game and Fish Department is an effort to guide stocking techniques and sizes for trout stocked from this hatchery. The program not only gives us information on how to provide good fishing for many fishermen, but it also lets us know how best the fishermen's money (approximately one-quarter million dollars per year) can be spent.



Above: Trout are scooped into wash tub. Water in tub contains chemical that temporarily stuns fish for easier handling. Below: Catchable-sized trout are shown with tag inserted under dorsal fin.





Above: After tagging, fish are dropped back into concrete raceway where they revive from chemical and are none the worse for wear. Below: Newly tagged fish ready for delivery to Colorado River areas. Brightly colored tag will not pull out or interfere with fish's ability to swim.



MEET AG&F

BECOMING a familiar face to many in the southern portion of the state, new Tucson Regional Supervisor Dick Endress finds the job "rather hectic" at times. Dick is one of the two newest regional supervisors for the Game and Fish Department, taking over the task from Ted Knipe who held the position from 1960 until August of last year.

Dick Endress was born in North Manchester, Indiana, in 1937. He holds a Bachelor of Science degree in Biology from Manchester College and also a Masters degree from Purdue in Wildlife Conservation.

Dick confided that he decided he wanted to be a "game warden" in the seventh grade, and as sometimes the case, a childhood fancy turned into reality. Dick has been with the Department since April 1964. At that time he was assigned to the Holbrook area as a Wildlife Manager. In December 1966, he was moved to Phoenix as a Land and Water Projects Specialist.

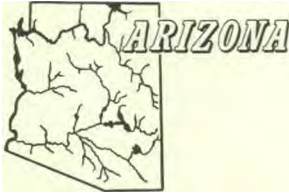
"But I didn't last very long at that job," joked Dick. "In the seven months that I was with the Land and Water Division, I was just beginning to understand what all was going on, and now I'm down here (Tucson)."

Dick is married, has one child, a girl with the pretty name of Sonya. Dick's wife, Sharon, is originally from Colorado and contributed to his delinquency last Christmas by giving him a movie camera. With outdoor activities as a hobby, the movie camera has fit in well "and now I'm running around taking pictures of everything and everybody," said Dick.



DICK ENDRESS
SUPERVISOR, REGION VI

OUTDOOR NOTES FROM



EDITED BY BOB HIRSCH

OUTDOOR NOTES OUTDOOR NOTES OUTDOOR NOTES OUTDOOR NOTES OUTDOOR NOTES

THE FIERCE STORM and record snows that hit the Arizona high country this winter created many problems for the Department. In many small communities our local Wildlife Managers were the only four-wheel-drive equipped men in town. Long hours were spent in rescue work by Department personnel and effects on wildlife species are still being determined. Antelope were widely affected, also javelina, quail, turkeys, deer and elk were influenced to a lesser degree.

There are some good results that will accrue from the storm, however. The brim-full reservoirs around the state promise good fishing for years to come. And the green feed in the chaparral and desert areas of the state will practically guarantee good populations of small game and especially quail next fall. In fact, all of the animals in the state will greatly benefit over the long run from the extra moisture laid down by the storm.

As is so often the case with nature, nothing is all bad nor all good.



LOUIS UNTERMAYER said it: "But for sheer tricks, fight and stamina, give me a small-mouthed lass at sundown."

NORTHERN PIKE were introduced into Arizona waters a couple of years ago by our fisheries division. Lower Lake Mary has furnished the best sport for this new tiger. Last November five-year-old Teddy Wong of Flagstaff took an eight-pound, five-ounce fish from that lake to establish a new state record. Just six days later, standing in the same spot, his older brother Fred Wong caught an eight-pound, 14-ounce specimen to grab the crown. To add insult to injury, Fred used the same black plastic worm that Teddy had wielded a week earlier. Which leads us to the observation that there's certainly nothing wong with that family's fishing ability.



TRAINING SPECIALIST Bill Huguenard of the Department's I & E Division is the guy mainly responsible for the administration of the Arizona Firearm Safety Course. More than 30,000 students have graduated from the safe gun handling classes since their inception more than 12 years ago. While we love to bask in the warmth of admiration that these graduates exude, it is the volunteer sportsmen teachers—all 600 of them—who really make the program a success.

To illustrate the kind of unselfish

individuals these instructors are, Bill tells of a class he recently held in Wellton. Six Wellton-Mohawk valley men were certified to teach at Bill's training sessions. Not more than one week later these six had begun the first of several courses they have since held for youngsters (and adults, too) in their community. Through their efforts another 75 of our state's hunters are enjoying the outdoors more as safe, informed sportsmen.

4

EAGLES, HAWKS AND OWLS are *not legal game* in Arizona. Under a law which went into effect last summer, all birds are protected. Besides game birds like quail, doves and the like, there are only four species of non-game birds which may be hunted. They are starlings, ravens, crows and English sparrows, and you do need a license.



SOME OLD CAR BODIES were covered by lake water to provide a haven for fish. A man fishing there one day felt a terrific strike. He knew this was a big fish and wanted desperately to hang on and land it. He wrestled it quite awhile, then felt it hang onto something solid. Still he held the line.

Noting some skin divers in the area, the fisherman called to them to come over and dislodge the big fish. The divers obliged and went down. After a long wait they came up to report that he had hung the biggest catfish they had ever seen.

The angler asked if they couldn't scare it out or get it untangled. The divers explained there was nothing more they could do. The catfish had gone into one of the old car bodies—rolled up the windows and locked the doors! (From the *Missouri Conservationist*.)

DECEMBER'S BIGHORN SHEEP HUNT featured two records—one old and one new. The "new" involved two trophy rams taken in the Cabeza Prieta National Game Range. This large desert area, located along the Mexican border south and west of Ajo, was opened to sheep hunting for the first time this year through the cooperation of the Fish and Wildlife Service, Air Force and Marine Corps. The good numbers of sheep observed by hunters and the two fine trophies taken indicate a huntable population there. The state's sportsmen hope the spirit of goodwill and cooperation between the agencies will continue so that the area can be open in years to come.

Unit 43B, along the Colorado from Parker to Yuma, produced the highest success ratio. This is the "old" area, having been hunted every year since sheep became legal game in Arizona in 1953. This unit has an outstanding record and indicates that the Department's sheep management program is a successful one.



"If I don't sell one I'm fired."

BULLSEYES & BACKLASHES

Gentlemen:

Recently I saw for the first time a copy of your publication *Wildlife Views*. This particular issue was for July-August '67, and contained your interesting editorial on private ownership and use of guns. I agree completely with the views you stated and have written my congressman several times on this matter.

During my active service in the U.S. Air Force I was privileged to be stationed in Arizona in 1949 and again in 1951. Since that time I have returned at every opportunity to fish in the White Mountains near Greer. This fall I was able to be at Greer from September 14 to October 31 and the fishing was better than in any other year I can remember. Most of my fishing was in Tunnel Lake, and the fly fishing throughout most of October was the best I have ever experienced anywhere—that includes a three year tour in Alaska.

I noted in the *Wildlife Views* your offer to send the magazine for a year to purchasers of nonresident licenses. I would very much appreciate receiving the publication. Following is the number of the Class A license I purchased on Sept. 15, '67 at Greer, Arizona, and also my mailing address.

Herbert H. Dahnke
Monterey, Tennessee

Dear Sirs:

We want to thank everyone who works so hard to put together the wonderful publication *WLV*. We have lived in Phoenix for six years and have been receiving *WLV* for three years and have really enjoyed it. Several friends of ours, after having read our Sept.-Oct. edition, asked us to send their names in so they would be put on the mailing list also. We are members of the Maricopa Family Campers "The Clowns" and enjoy the group campouts. We very often discuss the stories in *WLV*. Keep up the good work!

Dottie & Andy Santana
Phoenix

Gentlemen:

Kindly place my name on your mailing list for *Wildlife Views*. It's a wonderful publication, and I'm getting tired of borrowing it from friends!

Julius R. Wilson
Sierra Vista

Dear Sir:

I am enclosing \$1 that I may become a subscriber to the bi-monthly magazine *Wildlife Views*.

We read about it in *Lake Havasu Herald*. We are planning to become residents of Lake Havasu in August of this year. We would also like a copy of "Arizona Fishing Holes."

Norman & Bea Midgley
Prospect Park, N.J.

Sirs:

We would like to subscribe to *Wildlife Views*. Enclosed is a check for \$1.00. We hope to get this magazine free in a year or so as we have purchased property at Lake Havasu City and are real anxious to move there.

George W. Clark
Redondo Beach, Calif.

Gentlemen:

On reading through the September-October 1967, issue of *Wildlife Views*, the article on first aid attracted my attention, and my compliments to you on such a well written and informative article.

Will you please place our office on your mailing list for further issues of *Wildlife Views* as my personal copy "wears out" too fast.

William W. Pearson
Amer. Nat. Red Cross
Tucson Chapter

Editor:

Please make me one of your subscribers to *Wildlife Views* magazine. I think the Department is doing a fine job, but have a hard time convincing hunters and fishermen when they are unsuccessful that they are to blame instead of the Department.

Carroll Hicks
Holbrook

Sir:

I have just read my copy of the Annual Report *WLV* 1968. I have the feeling that I have had a personal conversation with each division. My compliments to everyone in the Department.

Jack W. Gabbert
Phoenix

Sir:

The organizations of hunters had better stop listening to all the ego-building congratulations and *get* concerned with conservation ecology. By conservation ecology I mean the *wise* use of natural resources to the greatest good of the greatest number.

Some of us who have been called "anti-hunters" have spent years developing habitat. Some of the sportsmen still do not seem to understand that unless there is favorable *habitat*, there will not be much game *no matter what mankind does* otherwise.

The greatest obstacle to the improvement of habitat in Arizona is the open range situation. Yet there is no effort being made to change the laws. Opposition can be expected, of course, from the loud mouthed, irresponsible stockmen and hunters, but good game habitat would increase by 1000% if uncontrolled cattle and cattlemen were not allowed to destroy what someone else has built up.

My whole point is, you Mr. Editor, ought to get the sportsmen into the field at other times of the year other than "open seasons."

Five years (two years) ago, not many ranches were posted against hunting in this area. Now, due to human depredations, every place is posted, including mine.

Peter R. Kelly
Benson

Dear Editor,

Well you boys in Arizona have done it again—come up with two articles in the same issue of *WLV* which I feel need to be read by all outdoors-oriented folk. I refer to the Nov.-Dec. issue articles by Madson "The Hunters" and O'Brien—"Sportsmanship?" Gentlemen, you are not afraid to stand up and be counted and that is one of the big reasons I enjoy reading *WLV*. Your views are forthright and you do not seem to mind stepping on toes. I find this attitude refreshing and needed.

Other game department magazines with which I am familiar, lack *WLV's* straight talk on controversial subjects. These other magazines are excellent in presenting tips on hunting and nature study articles of the state's flora and fauna, but lack the articles concerned with attitudes and concepts such as hunting and sportsmanship. These concepts are vitally important to an urban oriented America in that the future users of natural resources will have lost touch, to a great degree, with the land. They will thus need to have principles of sportsmanship instilled in them by formal and informal education.

Keep up the good work. You're doing fine, even for this far away location in Pennsylvania.

Peter Shogren
Lock Haven, Pa.

Dear Dr. Swank:

I want to congratulate you on continually improving *Wildlife Views*. Avoiding the temptation to simply tell hunting and fishing stories, the magazine rises to the challenge of proving biological facts in an interesting manner.

The November-December issue is a good example, with Steve's fine article on "Mearns' Quail" and Schimmel's "Salt River" these are examples of factual reporting, concisely written. Good balance is achieved by the pertinent and well-written articles "The Hunters" and "Sportsmanship?"

I've particularly enjoyed your editorials; they are both short and to the point! I'm going to speak on "Wildlife and Wilderness" and would like to quote from your editorial; specifically, your statement, "For all his alleged irreverence for life, the hunter has done the most to restore and sustain today's wildlife populations."

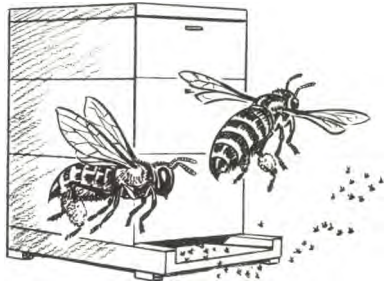
Dwight R. Smith
Colo. State University
Fort Collins, Colo.

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Nature Notes:

**A BEEHIVE MAY HOUSE FROM
50,000 TO 80,000 BEES**



**BEES ARE MORE ILL TEMPERED
IN BAD WEATHER THAN THEY
ARE ON FAIR DAYS**



WHAT'S GOING ON HERE?

One picture is worth a thousand words they say. This photo was taken shortly after the snow started falling in northern portions of the state last December. It got even deeper. Regional Supervisor Levi Packard spent much time on the roof of the Flagstaff office pushing the white stuff off in an effort to keep the roof from collapsing. After two weeks of almost constant snowfall, drifts had reached to the top of the building and there was no where else to put the snow. At this point someone suggested Packard dig a hole and bury it.

ARIZONA GAME & FISH DEPARTMENT

I & E Division

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