

# Knowledge Is The Key To Fishing Success

by BUCK PERRY

## Part VIII

### EDITOR'S FOREWORD:

We can never say enough how privileged we are that Buck Perry has chosen *Fishing Facts* to be the vehicle through which he is sharing his knowledge with fishermen everywhere.

E. L. (Buck) Perry is the father of structure fishing. This modest, soft-spoken former Physics Professor from North Carolina State has become a legend in his own time. His discoveries about the basic movements of fish have revolutionized all fishing and are the basis of modern fishing as we know it today. In addition, he has given us the vocabulary of modern fishing by coining such words as "Structure", "Breakline", "Sanctuary", "Migration Route", etc. To put it mildly, all of today's freshwater fishermen owe him a great debt.

We have had countless requests for reprints of this entire series of Buck's articles which began in our June 1972 issue. We are pleased to announce that reprints ARE NOW AVAILABLE at 25¢ for each part, postpaid.

To some, the price of 25¢ for a comparatively few pages of printed matter may seem high as compared to this entire magazine for the single copy price of 75¢ and the subscription copy at about 50¢. That difference is easily understood by those who know about the high cost per each for printing small quantities of anything. The information they contain is, of course, priceless.

If you wish to order reprints of any or all parts of this series, please enclose 25¢ for each part desired, and send your order to Northwoods Publishing Co., Inc., P. O. Box 4169, Milwaukee, Wis. 53210.

Many fishermen are not aware that a contour map can provide valuable fishing information. To many, these maps are just a bunch of lines; to others, the lines have a little more meaning in that they show some-



These fish were caught from a map! Not from a piece of paper, of course, but from the INFORMATION on that piece of paper called a map, and from proper INTERPRETATION of that information. In this, the eighth part of this current series by Buck Perry, Buck tells us how to interpret the information contained on a lake contour map so as to lead to catches like this.

Father and daughter on the lake at sunset, and the world is a good place. That's our Publisher, George Pazik, at the oars, and his oldest daughter Marge, (now Mrs. Dave Herrewig). Dave is one of our Staff Photographers, and Dave was in another boat to take this picture which was not posed, it just happened. Both Pazik daughters, Marge (24) and Carol (18) started fishing when they were only three or four . . . got their very own casting rods when they were ten.

thing about water depth; and, some few fishermen may occasionally check one for some specific information such as an underwater island. But, for the vast majority of fishermen these maps play no part in their fishing, or at the most a very limited part.

Contour maps are worthy of far more than a quick glance! There is a great deal to be gained from these maps, provided they are studied and *interpreted* correctly. Most bodies of water have some type of contour map available. These maps may not show the small details that are important to the fish, and to the fisher-

man, but they will, in most cases, show the larger picture. And from this the fisherman is able to pinpoint the areas for a more detailed study.

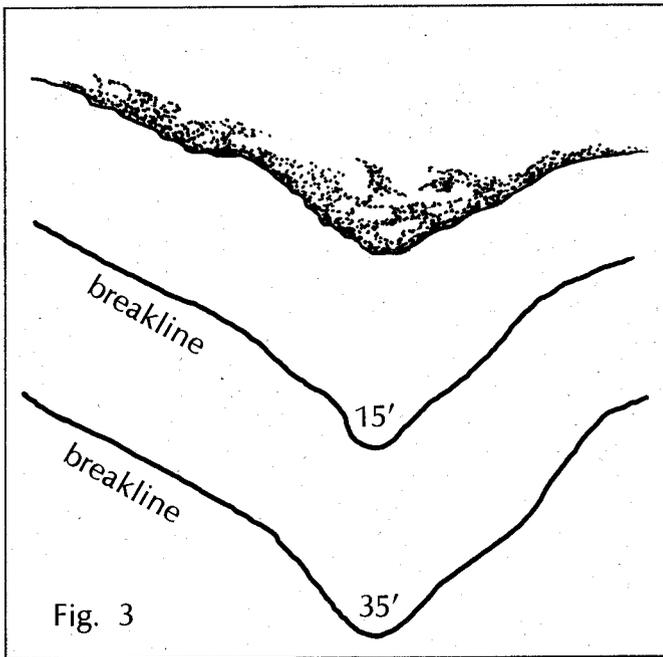
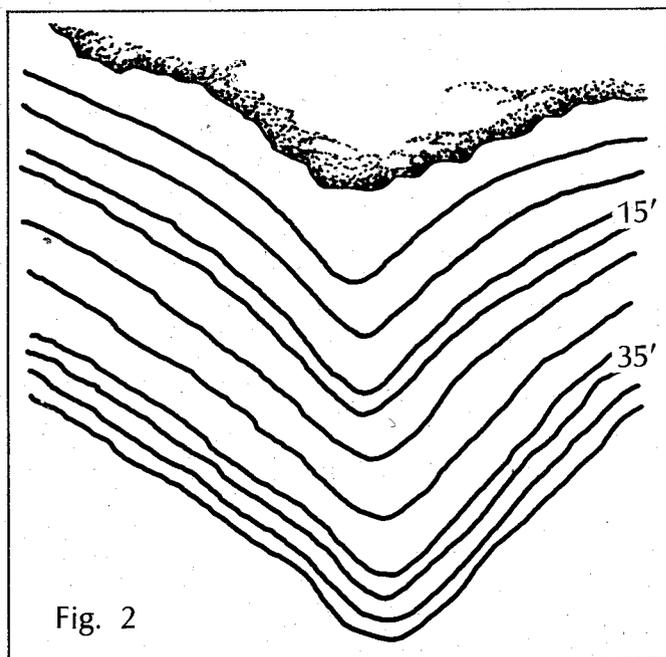
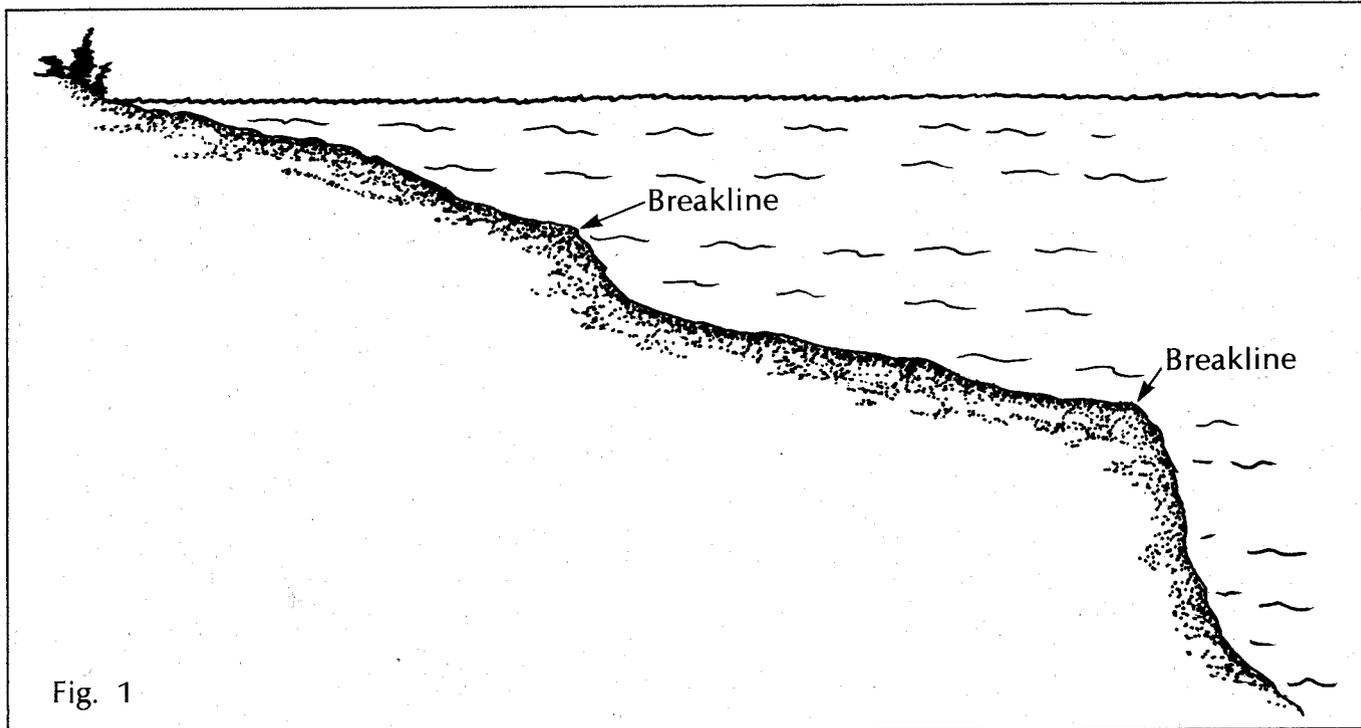
A contour map can be of tremendous help in eliminating most of the lake *before* you get on the water! Many lakes have good fishing areas, or productive water, in only a *fraction* of the total area of water available. So, in addition to providing useful information they can be a time-saver as well. No time need be wasted in areas that will *not* produce fish.

Why then are contour maps not being utilized fully by fishermen and

the information they provide put to use?

I find that the average fisherman, first of all, *does not know how* to read the map correctly; and, secondly, he does not know how to *interpret* it! This fact is borne out by the large number of maps that are sent to me to be marked. This lack of knowledge is certainly understandable, for a great many do not understand fully the basic habits and movements of fish, and how the lake or reservoir bottom conditions affect him.

To show what information is available in a contour map and how this information can be used to good ad-



vantage, let's take as an example a typical map, and from it extract and digest the information it provides. But, in order for you to understand more fully how the results are arrived at, a review of basics plus additional tips, or information, is called for.

(1) The home of fish is deep water, the deepest water in the area.

Anytime a fish is caught, it must be remembered that this fish *originated* from the deepest water in the area. This could be a deep hole in the center of the lake, or it could be a deep channel in the area. The immediate reaction to a strike or a fish should be, "How did this fish get here? What led him here? What route did he take in arriving at this particular spot?"

(2) Fish use bottom STRUCTURE to arrive at a particular spot. The most common structure that fish use is a BAR; a ridgelike formation that extends out from the shallows into deep water. The structure must EXTEND ALL THE WAY TO DEEP WATER! Fish must be able to see the route they are to take IMMEDIATELY upon leaving deep water, and the route must be marked by visual SIGN POSTS (breaks) for the movements, or migrations, from deep water to shallow, or vice versa.

(3) In order to fully "read" a contour map, there is one additional feature that you should be aware of, as it is of great importance in arriving at whether or not a structure is worth working, and to pinpoint, to some degree, the CONTACT POINT (or the NEAR contact point) of fish as they begin migration.

This particular feature is a BREAKLINE; that is, a position on structure where there is a rather sudden increase in depth.

Normally, in reading a map this feature is overlooked, and unless searched for and determined, you have no way of knowing which is the BEST structure to work, or if the structure is very large which area of it should be worked.

In fact, a practical interpretation of bottom structure is not possible without noting this feature.

So that there will be no question in your mind as to what exactly is a breakline, and how it relates to interpreting a contour map, note the following sketches.

Figure No. 1 shows a cross section of structure off a point of land.

On this figure two breaklines are pointed out. A breakline is the proper description in this case, as the area has a sudden change in depth.

In Figure No. 2, we see the same structure from a top view with all of the 5 foot contour lines drawn.

In studying a contour map, you need *not* necessarily be concerned with *all* of the different depths shown, but you would concentrate on any *breaklines* that exist. In this particular drawing, you should note that two breaklines extend completely around the structure (or bar); one occurs at the 15 foot depth, and the other occurs at the 35 foot level.

Figure No. 3 is a fisherman's view of this particular structure, with the two breaklines clearly visible.

Note that the 35 foot breakline is also the drop-off, and it would be at some place on this particular breakline that fish would first appear (make contact) as they begin migration.

In studying a contour map, many of you may have no trouble finding the breaklines, but some of you may have some difficulty in determining the area, or section, where fish first make contact with the structure, or breakline.

Let us view a few sketches that may clear this up.

Figure No. 4 is a cross-sectional view of a structure with the breakline shown.

In Figure No. 5, a top view of the same section is shown with the contour lines changed slightly from the previous drawing (Fig. No. 2). The contour lines are no longer running all around the structure in a rather uniform manner, but instead they form a breakline at only one spot. In this case, this area could, and should, be called a "break" instead of a breakline. In most bodies of water the breakline is not located around the entire structure, but is located on only a portion or "spot" of the main structure as shown. In this instance, the breakline is more accurately referred to as a "break." Figure No. 5 would be described as a 10 foot "break" occurring at the 10 foot depth.

When studying an average contour map in an effort to determine: (1) where your efforts should be concentrated; (2) the worth of an area; (3) the location of the contact point, *the only clue that you will have is given by the breaklines.* The break-



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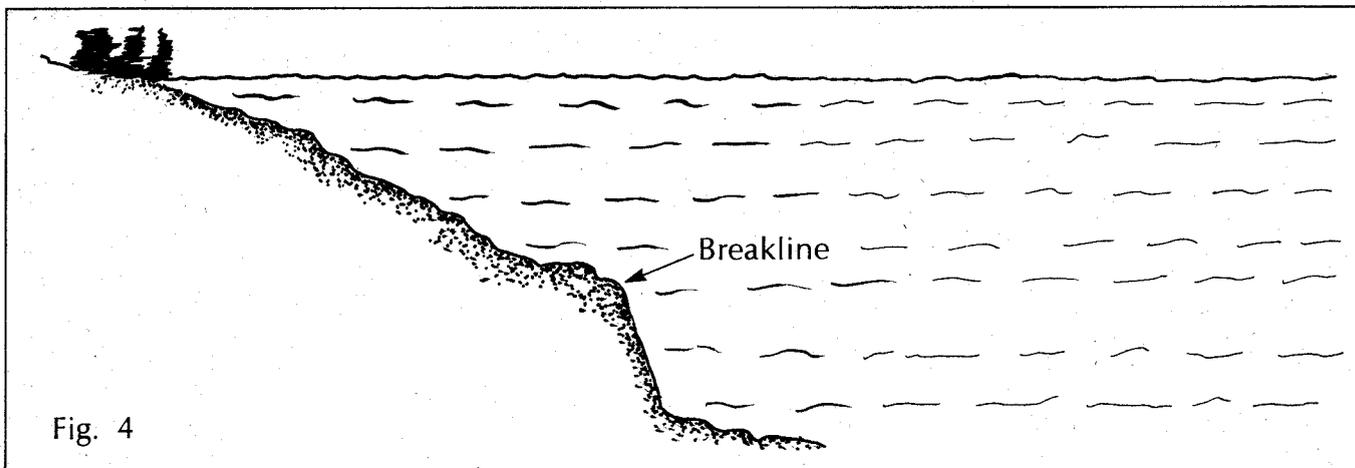


Fig. 4

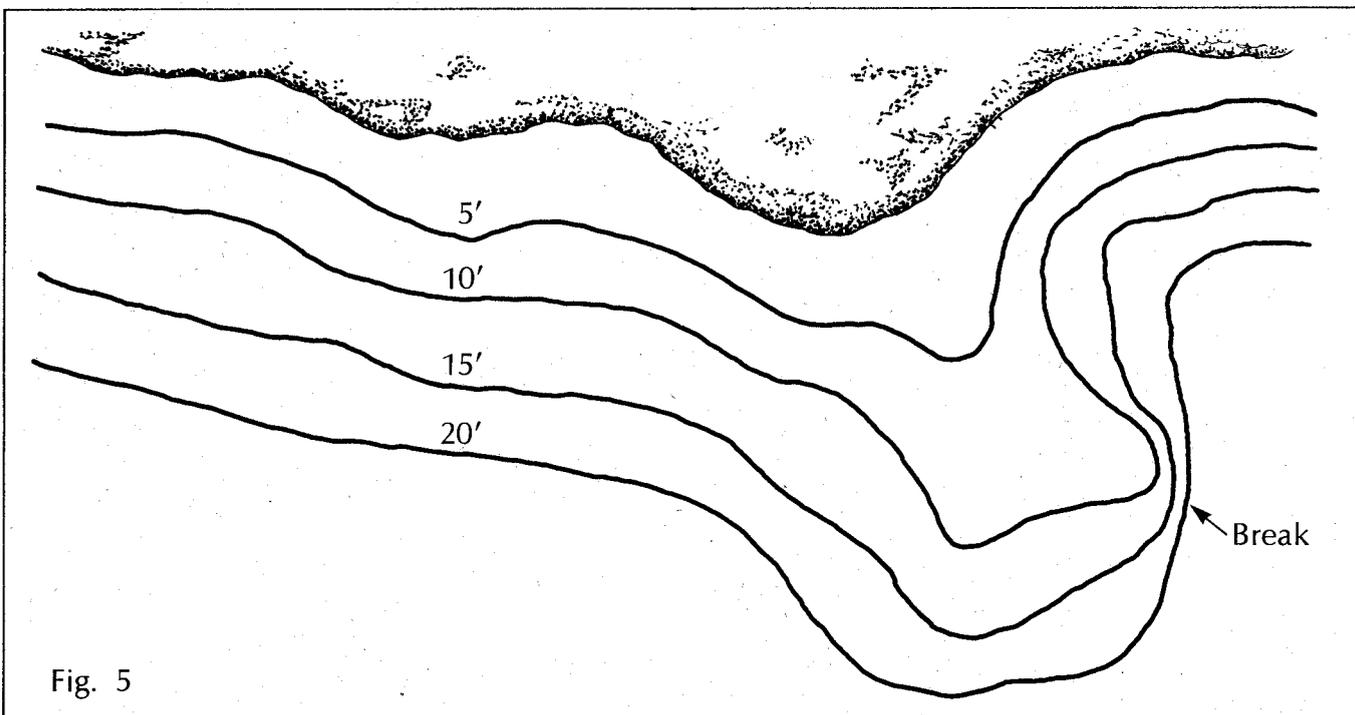


Fig. 5

lines *determine* if these conditions are present.

When the breakline occurs at only one spot (break), such as in Figure No. 6, you consider *this* the contact point.

However, on a long breakline such as in Figure No. 3 (where no break is shown) you will have to check the breakline thoroughly to determine the contact point. In this instance, the breakline contact point would be at breaks in the form of a rock, an eroded spot, a hump, stump, weeds, bushes, sunken objects and so on.

There are three main ingredients that an average contour map gives which serve to show you the fishable spots. They are:

- (1) Deep holes or channels.
- (2) Structures, such as bars and underwater humps (islands).
- (3) Breaklines.

No contour map will show the

small details on structure, such as any small projections, eroded spots, rocks, stumps, small humps, dips, logs and so on. *These are the details you must determine by actually working the area!* But, most maps will show the main features listed.

In any *interpretation* of structures shown, you should keep a few things in mind when considering depth. Do not be too deeply concerned about HOW deep the deepest water is. I personally prefer that the depth be at least 35 feet, and deeper if possible. In many bodies of water this much depth is not available. In this case, the deepest water whatever it is, is the home area.

Some of you become confused about water depth. When mention is made of the 30-35 foot depth being an important depth, many react by pointing out that their lake has 80 or 100 feet of water. I do not care how

much water is BELOW the 30-35 foot depth. However deep your water may be, you assume that the deep water sanctuary of fish is around this 30-35 foot depth, until proven otherwise. At times, under certain weather and water conditions, the fish will be down to the bottom of that 100 foot lake. But, as conditions become more normal, the fish move back to the 30-35 foot zone. It is this position that you must visualize as the STARTING point of fish movement, and subsequent migration.

In observing the breaklines on contour maps, you should observe all breaklines that occur shallower than 30-35 feet. The 10 foot depth (Figure No. 5) is rather shallow, and only in exceptionally good migrations will a school of lunker fish move up to this breakline. This type of migration does not happen very often.

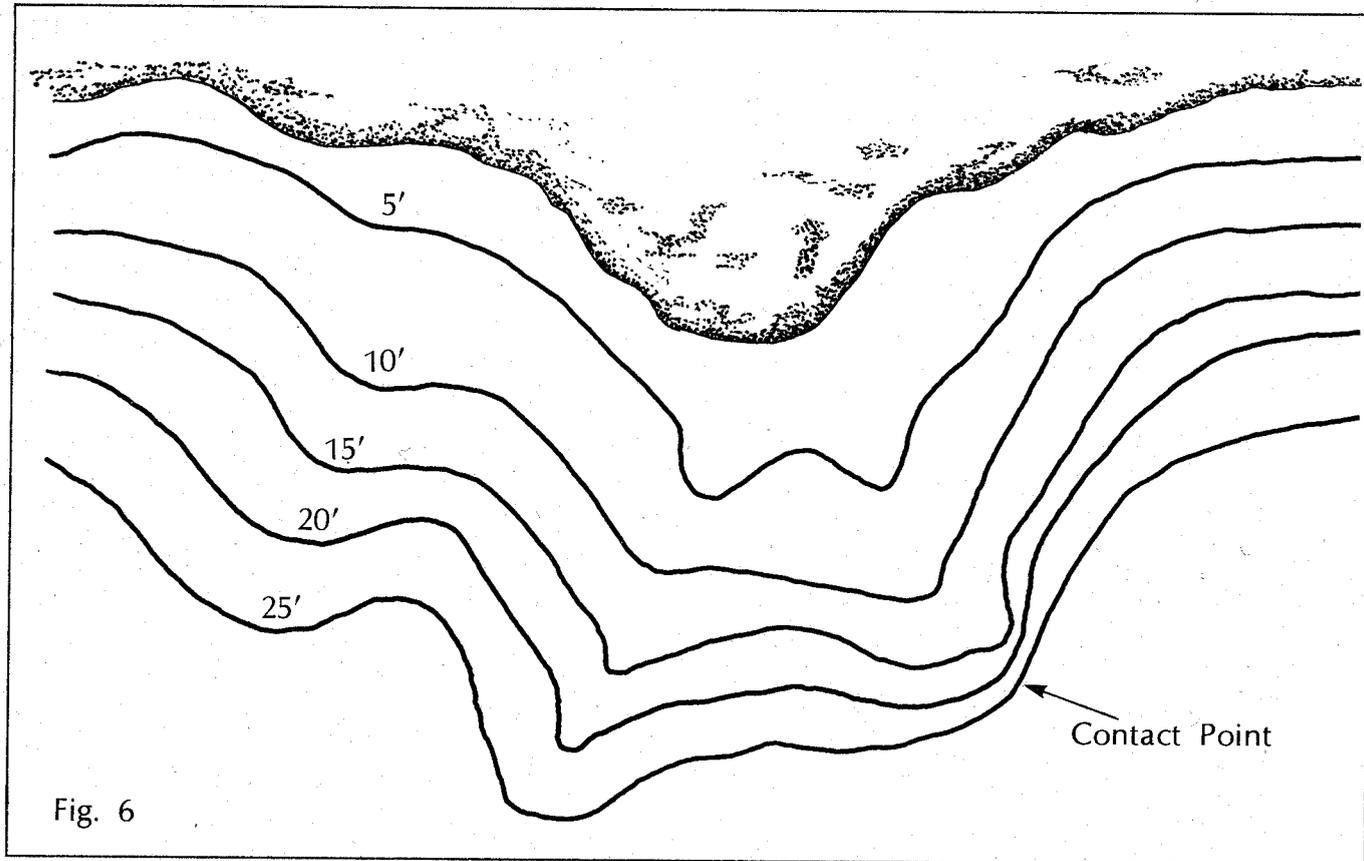


Fig. 6

Any breakline deeper than 10 feet becomes more important, especially those from 12-20 feet. The deeper breaklines in this range will receive more frequent migrations than those with shallower depths. But, the shallower breaklines will be more easily identified and more easily worked, as fishing will not be quite so EXACT as those in deeper water, and usually the fish are more active.

If it were possible to pick out an ideal breakline it would have to be around 14-17 feet (Fig. No. 6). This range gives good depth for lunker fish migration and, more importantly, you can work it easily — both casting or trolling.

With all of these various facts in mind, let us look at a sample contour map. We will approach it as if you have never seen a map before. We will observe all features and then put an interpretation on what is shown.

In the sketch shown, you are looking down upon a lake. (Fig. No. 7)

The scale shows that 1/2 inch equals 100 feet.

Just what does this mean, and how can it serve any purpose?

First, every 1/2 inch of the map represents 100 actual feet of the lake. Either by actual measurement, or by an approximate guess, the distance and size of the structures can be determined. The quantity of deep

water can be determined, and the length of any particular breakline as well. All of these measurements will serve in determining the position of any structures in the lake, and how best to make presentation of lures or bait.

Five foot contour lines are mentioned. Just what does this mean?

You will note that a line is drawn all around the lake and is marked five (5) feet. This means that this line follows a path around the lake that is actually five feet deep. If you get inside this line, toward shore, the depth of the water would be shallower. If you stepped outside this line, toward the center of the lake, the water would be deeper than five (5) feet. If you were ten feet tall and wanted to walk around this lake with just the top of your head sticking out, you would have to follow the path of the line marked ten (10) feet. If you did *not* take this path, your head would be either sticking out of the water or you would go out of sight!

Many maps will not be marked with the footage shown on the lines. Instead, the map will show only at the bottom, or over in one corner, that the lines are five foot contour lines. In this case, you must carefully count off the lines to a certain sec-

tion to determine just how deep this section might be.

With the information given as to contour depth, you can now determine the water depths of this particular section and the deepest water in the area noted. A picture of the area now begins to emerge.

At the section marked "B" — This is a shallow, flat sloping bottom; the depth does not drop off very fast. Contrast this with the section marked "E" where the bottom falls off fast, sharply creating deep water very close to shore.

The section marked "C" is not a bar, but a washed out gully.

The section marked "G" (right hand, bottom) is a deep cove, or bay, with steep banks.

The section at "D" is a nice bar, or ridgelike structure, that runs out for some distance into the lake, toward deep water. This bar runs rather constant until it reaches the fifteen (15) foot depth, then it rapidly drops off to twenty (20) feet on the end and on both sides. You will note that on the right side of this bar (facing it) is a short "finger" on the twenty (20) foot contour line that extends out toward the twenty-five (25) foot contour line of the thirty-eight (38) foot hole. Keep this particular spot in mind, as later on we will call attention to this particular feature.

SCALE: 1/2 IN. = 100 FT.  
5 Ft. Contours

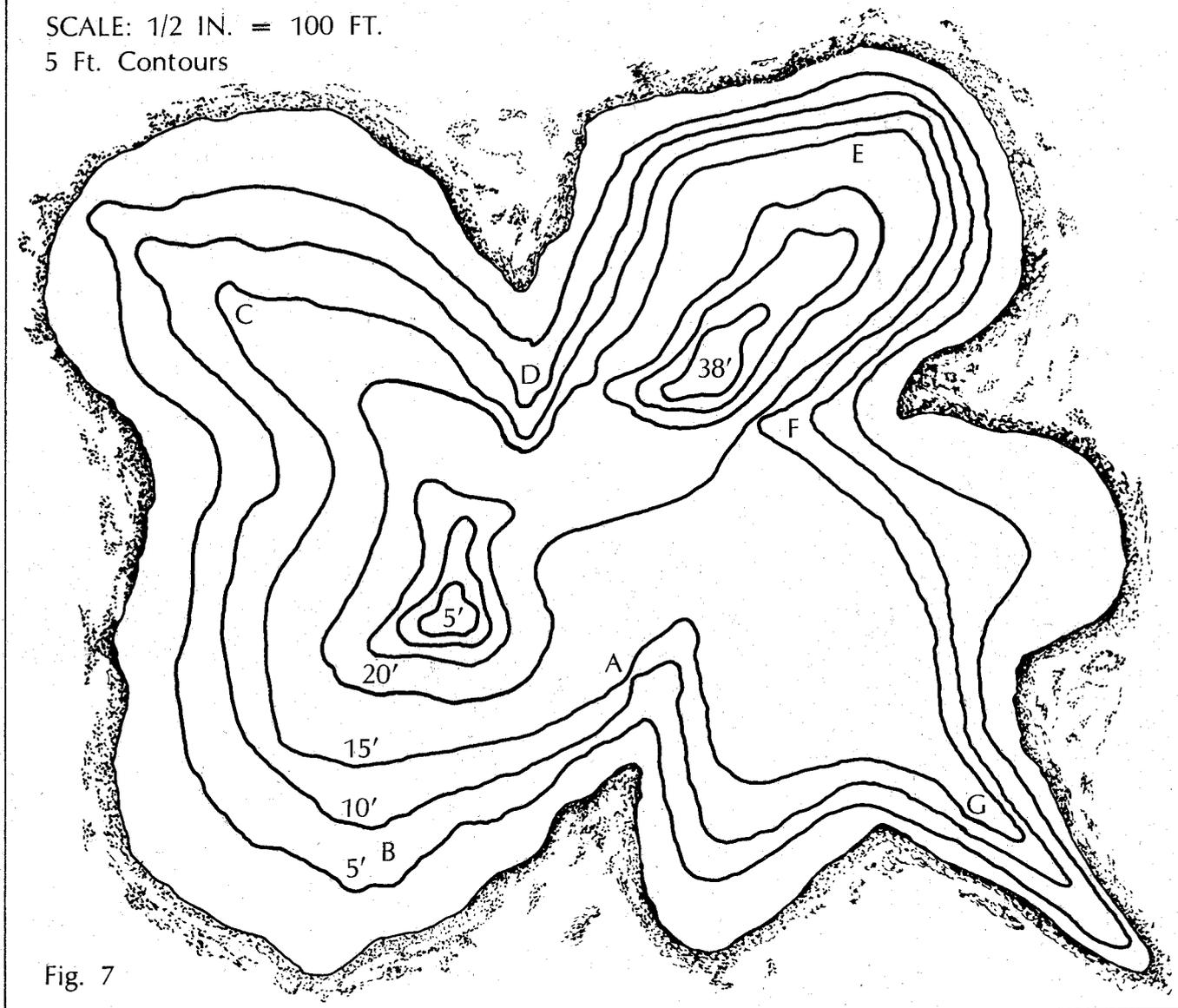


Fig. 7

Structure "A" runs out nicely, but note the area just in front of the fifteen (15) foot depth. Here is a great big flat area that runs most of the way across the body of water. On the left side the five (5) foot contour has a slight "break" down to the ten (10) foot contour. Then farther out, on the ten (10) foot contour, another "break" occurs to the fifteen (15) foot contour. You could call these two 5 foot "breaks" a breakline; but, in a situation such as this it is preferable to refer to them as a "break" since there is not a continuous break along the whole area, but only a sharp break at one particular place on the contour. If the break had extended for some distance, such as in section marked "D", it would be referred to as a *breakline*.

Out from the small "breaks" on the structure marked "A", the bottom flattens out until it reaches the twenty (20) foot contour, and this

represents the deepest water in the entire left end of the lake. It is assumed that you have already observed that the section marked five (5) feet is not a deep hole, but a hump or underwater island. (On most maps the top of humps will be marked with the depth.)

Section "F" is another bar. It is a better structure than "A", because the twenty (20) foot depth water swings in fairly close and, subsequently, drops off into the thirty-eight (38) foot hole.

In studying a contour map remember that if the contour lines run far apart, this is more of a flat sloping area; where these lines swing in close, there is a sharp increase in depth. If the two lines come close together for quite a distance, this would be called a *breakline*. If the two lines come close to each other at a point or spot, you would refer to this spot as a "break". It is in these

areas that you place emphasis when reading a map. These are the areas where fish will be found.

Each area should be studied carefully and the study should follow a pattern. First, find the deep holes or channels. Next, note any underwater islands. Then, search for bars or narrow running ridges that extend out *toward* the deep holes. Note if any large flat areas exist between the bars and deep water. Then, carefully study the contour lines to see where a "break" occurs, such as the "break" at "A" and on the finger at "D". In establishing this type of study pattern, all of the pertinent details will be determined.

We have now carefully studied the map and a good mental picture is in mind. The time has come to evaluate the information.

What does the map tell you?

If I were to evaluate the areas marked, it would be thus:

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- (A) A nice looking structure, but not likely to get a good migration. The flat area directly off the end of the bar (between the fifteen (15) foot and the twenty (20) foot contour) would hinder any migration toward this particular structure. Fish must be able to see their route and destination.
- (B) A big flat. There is no indication that any "breaks" exist in this area, it would be passed up as a fishing area.
- (C) This is more or less a flat area which has a slight depression caused by washing or erosion. There is no breakline anywhere in the area, so, again, this area would be eliminated.
- (D) This is the best structure in the area. It has a nice "break" on the end and sides, and in addition has a "finger" in the direction of the deepest water (home of the fish). This "finger" should be the first contact point of the fish!
- (E) Section "E" is a steep, deep area. This particular section could be important under certain conditions and during certain parts of the season (colder). But, during most of the season (warmer) this area would be passed by.
- (F) Structure "F" would be the second choice as a productive structure. The contour lines do not show any particular "break" that would give a clue as to its worth, but upon inspection certain "breaks" could exist that would make it a better structure than "D".

"F" was given second choice from a study only of the contour map. Though no "breaks" show on the map, there is a good possibility that some exist. Thus, it's always wise to *check the structures that show possibilities*. In so doing, you get the "big" picture.

- (G) Here again, this area may be of importance during short periods of the season (colder), but in the overall picture, this type of area would not be of great importance.

Any underwater hump, or island, is always important structure. Most of them have some access to deep water. In looking at the hump on the sketch, it could have possibilities. The fish could move up through the 20-25 foot section off point "D" and, in turn, arrive at the top of the hump. If the fish took this route, it would be entirely due to the small "breaks" found in the twenty (20) foot section. If this rather large, flatter area did not contain any "breaks", you would draw a blank on this hump. This could be determined by checking out the area.

In Section "D", reference was made to a short "finger" found on the twenty (20) foot contour line that extends out toward the twenty-five (25) foot contour line, and it was noted that special attention would be called to this particular feature.

Quite often, a structure will have not one "finger" but several, such as shown in Figure No. 6. Your job is to recognize which one of the fingers would best produce. The key to determining this is to find the one with *the sharpest break to deeper water!*

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As fishermen, you should always be looking for the *contact point* on a breakline in the form of a "break," as illustrated. In studying contour maps, this is one of the prime features to look for.

As you can see, quite a bit of useful information can be determined by studying a contour map. But, in order to get this information, it is essential to learn exactly what contour lines mean. You must be able to *interpret* what you find, or it is of little value.

Every good fisherman has a map of the water he fishes. Some have the map on paper, some have it in their heads . . . but all have a map. If you are trying to fish your waters without buying or making yourself an accurate map, you are wasting a lot of valuable time. You could be wasting a whole season, you could even waste a lifetime of fishing!

**EDITOR'S NOTE:**

*Additional detailed information on where to get contour maps for any area of the United States and/or how to make your own, is contained in our book, "Lunkers Love Nightcrawlers."*