

# PRELIMINARY RESULTS IN THE USE OF A SPINE TAG

BY HARRY BARKLEY AND BARRY FREEMAN  
*Mississippi Game and Fish Commission*

## ABSTRACT

A vinyl tube is being used on the dorsal spine of bass, crappie, and bluegill.

Indications are that this tag does not have the adverse effect on the fish that the dart tag or the spaghetti tag has.

Loss of tags at the present time is high but work continues using different diameters of tubing and the addition of a glue.

---

There has been a constant search for a new fish tag that would overcome the problems presented by the present methods of tagging. This note is the result of another attempt to find the perfect tag.

The idea developed one cold rainy day during a discussion of a new tagging program to begin on the new Ross Barnett Reservoir, located near Jackson, Mississippi. The strap tag and the spaghetti tag (Tebo, 1956) had been used in previous programs. The first tag had been overlooked by the fishermen and the latter had attracted too much attention because of the irritated areas caused by the vinyl tubing.

When talking of the vinyl tubing the Junior author recalled an attempt he and Melvin T. Huish had made several years ago in Florida to develop a tag that would fit over the dorsal spine of catfish. This was to be in the shape of a cone and was to be made of Monel but a method of securing the tag could not be found, so it found its way into the trash can. The vinyl tubing could be stretched over the spine and would possibly hold thereby eliminating the attaching problem.

Bob Bryant, Superintendent, National Fish Hatchery, Tupelo, and his assistants seined eight bass and three bluegill from their ponds for the authors on February 12, 1963, so that the theory could be tested.

Since only one size tubing was available a spine that was slightly larger than the tubing had to be selected. The membrane on each side of this spine was slit and a piece of tubing approximately two to three inches long was forced over the spine. The weather was quite cold that day, and it was necessary to warm the tubing so that it would stretch over the spine.

Four of the bass and two of the bluegills were placed in a concrete holding vat approximately four feet wide and 30 feet long. On February 25 one of the bass died from a fungus infection and a bluegill was removed for the same reason. The tag was not believed to be the cause of the infection. On March 1, 1963, the remaining fish were removed from the vat. One of the remaining three bass had lost its tag. This was the only tag lost out of the six used.

The other four bass and one bluegill that were tagged were placed in one of the ponds on the hatchery. On March 28, 1963, this pond was drained. Three of the bass were found with the tag intact. The fourth bass was believed to have been found but the tag was missing. Nothing was seen of the bluegill.

No ill effects from the tag were observed. These results were encouraging enough to try the method in the field.

The field trial was started on April 4, 1963, on Ross Barnett Reservoir. The fish to be used were captured with hoop nets, hook and line, and electric shocker.

To evaluate the spine tag, it was decided to double tag the fish, that is, use the spine tag and the dart tag (FT-6, double barbed) manufactured by the Floy Tag and Manufacturing Company, Seattle, Washington.

The number of the various species tagged and the number of tags regained either through recapture during the tagging operation or caught by the fishermen from April 4, 1963, through July 31, 1963, is given in the following table.

The rate of loss is higher than it was on the fish tagged at the hatchery. It is thought that this was partially due to the fact that only one diameter of tubing was available but the size of the fish varied greatly.

Tubing of varying sizes is to be obtained so that a tag to fit the fish may be selected as is the case where strap tags are used. An epoxy compound has been found that will "set" underwater and this is to be used in an attempt to glue the tag to the spine.

The tests are to be continued, for it is felt that this type of tag will be superior to either the dart or the spaghetti tag in keeping down complaints because of the sores caused by these two tags.

To illustrate the point, out of six fish recaptured in hoop nets during the tagging operations five were badly irritated where the dart tag had been applied. The three that still had the spine tag had a little red area around the base of the spine.

The tag is easy to apply. Two men could weigh, measure, and apply both tags in an average of 53 seconds. It is readily visible and does not seem to interfere with the movements of the fish.

#### REFERENCE

Tebo, L. B., Jr. 1956. Preliminary Experiments on the Use of Spaghetti Tags, Proc. S. E. Assoc. of Game and Fish Comm., 10th Annual Conf., pp. 77-80.

TABLE 1. THE NUMBER AND SPECIES OF FISH TAGGED, NUMBER RECAPTURED AND THE NUMBER RETAINING THE SPINE TAG WITH THE DAYS ELAPSED BEFORE RECAPTURE, ROSS BARNETT RESERVOIR, APRIL TO JULY 31, 1963

Species	Number Tagged	Number* Recaptured	Days Elapsed	Spine Tag Present	Days Elapsed
Bluegill	382	10	3 to 39	5	3 to 31
Redear Sunfish	49	1	11	0	—
Longear Sunfish	34	1	2	0	—
Warmouth	74	1	34	0	—
Flier	11	1	7	1	7
White Crappie	162	13	3 to 84	2	3 to 5
Black Crappie	109	4	10 to 45	2	10 to 13
Largemouth Bass	18	0	—	—	—
Spotted Bass	2	0	—	—	—
<b>TOTAL</b>	<b>841</b>	<b>31</b>		<b>10</b>	

\* By sports fishermen and recaptures in nets