

## Scraping Improves Silver Nitrate Brands on Trout

Caustic pencils containing silver nitrate have been used effectively to mark stream salmonids (G.B. Pardue, Virginia Cooperative Fishery Research Unit, personal communication), but they are no longer available on the commercial market. Although the currently available silver nitrate applicators can be used (Thomas 1975), the results are often unsatisfactory. As Thomas indicated, the white line which appears on the fish immediately after marking may not be permanent unless retraced several times. However, retracing often smears the brand and makes it difficult to read. The need for retracing can be eliminated if the surface of the fish is scraped before the silver nitrate is applied.

A clear mark can be made by attaching a scraper made from a removable pencil clip to the end of a standard mechanical drafting pencil (Fig. 1). Pencils with an inside bore of at least 3 mm will accept silver nitrate applicator sticks 2 mm in diameter and 15 cm long. The only modification required is to file off the bulbous tip from the end of the pencil clip and sharpen the edge.

In use, the pencil containing the applicator is angled to place the silver nitrate tip and scraper in firm contact with the surface of the fish (Fig. 1). The pencil is then pulled in the direction desired to produce the brand. Silver nitrate from the applicator is deposited in the narrow zone cleaned of mucosal material and scales. The definition of brands produced in this manner is more distinct and permanent than those obtained by retracing with an unmodified applicator. Brands produced with the modified applicator have remained distinct on wild rainbow trout (*Salmo gairdneri*) for 1 year.

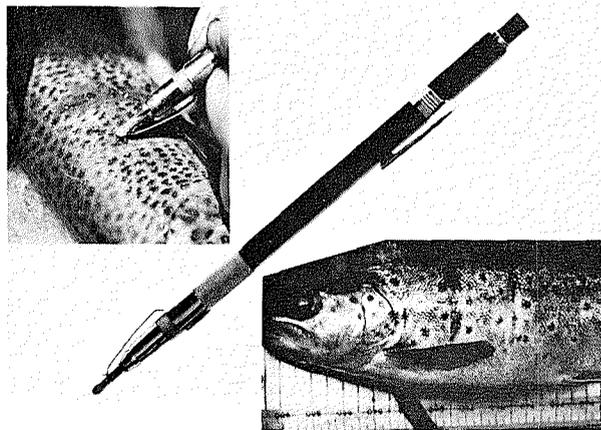


Fig. 1. Composite photograph, showing adapted mechanical pencil with silver nitrate filler, scraping technique, and resulting brand mark on rainbow trout (*Salmo gairdneri*).

### Reference

Thomas, A. E. 1975. Marking channel catfish with silver nitrate. *Prog. Fish-Cult.* 37(4):250-252.

—Thomas J. Harshbarger, *Southeastern Forest Experiment Station, Bent Creek Experimental Forest, USDA Forest Service, Asheville, N.C. 28806.*

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