

Standard Operating Procedure 10: Voucher Specimens, version 1.0

This Standard Operating Procedure explains how to collect and preserve fish voucher specimens for Shenandoah National Park. In the event that a new species for Shenandoah has been collected or specimens need to be retained for lab identification, use the following procedures. (Note that these are not to be regarded as museum specimens.)

Procedures:

- 1.) In the field, keep the fish alive as long as possible or get in a plastic bag and on ice as soon as possible. Usually someone on the crew will have an ice pack in their lunch and this will suffice. Otherwise, a water bottle or bucket can be used to hold multiple individuals. We do not carry ice, bags, or bottles of formalin in the field so the crews must improvise.
- 2.) At the office, fix the specimen(s) in fresh formalin in a plastic bottle for 5-7 days. Specimens larger than 200mm should be slit (2-3cm) on the lower right side to allow formalin to enter the abdominal cavity, or formalin may be injected via a syringe.
- 3.) The specimen bottle must be labeled as formalin and a temporary label should have the collector, date, stream, and site number.
- 4.) Following 5-7 days in formalin, the specimen should be soaked in tap water until formalin smell is barely perceptible. With larger fishes, the tap water may need to be changed twice a day to speed dilution of formalin.
- 5.) Transfer the specimen(s) to 70% ethanol and a glass jar after 2-4 days in water.
- 6.) Once the fish is in alcohol, a more permanent label should be made with the following information: Collector, Date, Stream, Site number or UTM's, County, State, NPS unit, Topo quad name, Common name, Genus name, Species name.
- 7.) Add the voucher to the list in the Biologists office and in O:\WORKING\AQUATIC\Collections\SHEN Fish Collection Master List and store in the "fish" cabinets in the "lower NCR" herbarium. These are not intended to be museum specimens but are retained for proper identification and teaching as aids for future employees.

SOP Revision History

All protocols, regardless of how sound they are originally, require modification as new and different information becomes available. SOP version numbers increase incrementally by tenths (e.g. version 1.1, version 1.2...etc.) for minor changes. Major revisions should be designated with the next whole number (e.g., version 2.0, 3.0, 4.0 ...). Small changes or additions to existing methods will be reviewed in-house by Shenandoah or Mid-Atlantic Network staff. However, if a complete change in methods is sought, an outside review is required.

Revision History Log:

Prev. Version #	Revision Date	Author	Changes Made	Reason for Change	New Version #
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