INTRODUCTION

For seven decades, since the mid-1940s, Smith Islanders have been building a simple flat-bottom skiff using common lumber sizes and the common tools readily available on Maryland's only inhabited off-shore Island. The skiffs were a new design developed to take advantage of the transom-mounted outboard motors that became available to the Islanders following World War II.

BACKGROUND

The Smith Island chain of islands lies in Tangier Sound, an arm of the Chesapeake Bay, west of the eastern shore of Maryland.

First inhabited by Native Americans, the islands were colonized by English settlers in the early 1600s. From the first their lives and livelihoods depended on boats. Large vessels took them to and from the islands and small vessels were used for local transportation. They learned to make and use hewn log canoes from their Native neighbors. These were powered by paddle and sail and were used for all aspects of daily life – these were their bicycles, cars, and trucks.

For almost 200 years – from mid-1600s to mid-1800s – hewn log vessels, sail and hand-powered, met all their transportation needs.

Mill-sawn planks became readily available in the mid-1800s and Islanders immediately began to build with this less expensive and more easily worked lumber. Flat-bottom, and deadrise, (V-bottom) sailing craft evolved resulting in the famed sailing crabbing skiffs and oyster-dredging skipjacks.

By the early 1900s, especially after World War I, reliable inboard gasoline marine engines began coming to the region. Larger sailing craft were quickly converted to this new inboard power supply by simply removing the sailing rig and mounting an engine behind the centerboard trunk.

Outboard engines arrived on Smith Island in the mid-1940s after WW II. The Islanders, always eager to adopt new ways to decrease labor and increase productivity immediately saw the value
in this new, more nimble power source for their smaller workboats. Before too long a new skiff design came into existence to take advantage of this marvelous invention.

From the mid-1800s to the mid-1900s, almost 100 years, one of the most useful small vessels had been a "sharp-ended" sailing and hand-powered skiff. These skiffs, with pointed bows and sterns, were the ubiquitous small workboats of the Island. As important to the Islanders as cars and pickup trucks are to mainlanders, major uses included tonging for oysters, crabbing, and general transportation. They also were used for commuting; between the shore and the larger workboats moored to a stout pole off shore, and to their crab-shedding pounds and shanties. These short distance tasks were accomplished by sculling or "shoving" the boat with an 8'-10' long oak paddle.

A "Sharp-ended" 20' 0" x 4' 8" sailing skiff, popular from the 1860s until the 1940s when they were replaced by outboard skiffs. (Ed Thieler model photos)

"We would have the scrape-boat [large workboat] tied to a pole and shove out to it [in the sharp-ender] and tie it to the pole. When we came back we would shove back home. This was difficult if the wind was blowin' or the tide was runnin'. The outboard made it easy." related one old timer.

With the arrival of the outboard, many watermen sawed off the pointed stern of their sharp-ended sailing skiffs and installed a transom in the truncated end to support the new engine.

No one is certain when, but probably about 1945, someone built the first "box-sterne" flat-bottom skiff specifically designed to take advantage of the outboard motors.

With experience it soon became apparent that a flat-bottom skiff, about 16' long, with 3'- 4' foot beam, powered with an outboard of about 15-25 horsepower was an efficient, convenient, and economical, boat and motor combination. Over the next 75 years, numerous watermen and waterman-builders became noted for their skill in building what became the ubiquitous "Smith Island Outboard Skiff."

BUILDING

The Smith Island boats are intended to be built using standard lumber sizes, usually 1" x 12" x 16'. The most common boat size was about 16' x 4'. Only a few were larger or smaller.
Local yellow pine (loblolly pine) was the wood most often used. White pine, white oak, cedar and cypress were also used when available. A somewhat standard plan has been handed down from builder to builder over the years.

On the Island it was necessary to build the boats with simple, readily available tools. In the early years table saws, belt driven by dredge-winder gas engines, brought ashore from oyster dredge boats (bugeyes and skipjacks) were used. Later when electricity came to the Island (1949) the "Skil" circular saw became an important tool.

A few common hand tools - saws, hammers, and planes were then sufficient to "cut it, nail it, and sail it."

The skiffs are constructed upside down – commonly supported at each end by saw-horses.

The topsides planks are constructed using 1" x 12" x 16' boards. The sides usually consisted of two planks, the lower plank referred to as the "chine plank" and upper called the "upper plank" or "sheer plank."

The two sides are then attached at the bow end to an inner-stem (apron, stem-liner), cut in a triangular cross-section from a 4" x 4" post. The sides are then sprung over a single 3' - 4' wide mold (spreader) shaped to a pleasing flare, placed appropriately between bow and stern to give a desirable waterline shape. The after ends of the planks are drawn together using pipe-clamps, come-along winch, or a twisted "Spanish windlass" rope. The transom is fashioned to fit and fastened in place. The side bottom-edge is then beveled with a plane to receive the 1" x 6" boards used to cross-plank the bottom.

The boat is turned right-side-up to finish the inside with side frames (cleats, vertical timbers), usually about 15"- 18" on center. Thwart risers, thwarts (seats), and decking are finally added.

Most importantly all are fitted with a small foredeck strong enough to stand on when the vessel is used to fish for soft crabs with a long handled dip net.

Many are given a narrow half-deck (wash-board) supporting a coaming (collar). Some have just an inner wale.
The transom outboard motor mount is cut to be 15"-17" above the boat bottom to accommodate a short-shaft engine. (The transom rake should be about 3"-4" in 15" or about 14°). The usual power was, and still is, an outboard motor up to about 25 HP.

None are fitted with oar-locks and oars. The preferred manual propulsion is an 8'-10' long shoving and sculling paddle described more completely below.

Finish is generally practical and basic – white top-sides and deck, and red copper anti-fouling paint on the bottom. The interior coating might be pine tar (a pine tar, gum turpentine and boiled linseed oil mixture), or paint; white, gray, or other light color.

Some had varnished transoms and other bright work trim and some used in duck gunning were painted in camouflage colors.

USE

Harvesting crabs in the Chesapeake Bay has always been a major industry using a variety of watercraft of different sizes.

In the context of these skiffs and this Island culture it will be helpful to know a bit about the life cycle of the Maryland blue crab and the history of local crabbing.

Maryland blue-crabs (*Callinectes sapidus* - "beautiful swimmer that tastes good") from: Greek *calli* = "beautiful", *nectes* = "swimmer", and Latin *sapidus* = "savory") live for about 3-4 years and must go through a periodic molt to shed their old hard shell in order to grow and mate. Before they molt they may swim considerable distances to find thick underwater grass beds in which to hide during this defenseless stage of their lives. The best of these grass beds are found in the regions of the Chesapeake Bay and Tangier Sound surrounding Smith Island, Tangier Island, and the other marshy islands in the chain.

Mature Crabs molt every 4 -7 weeks; the length of the inter-molt "hard" period depends on a variety of biologic and environmental factors. The molting process takes about a week. During this time crabs pass through a series of stages: hard, peeler, buster, soft, buckram, and hard again.

**Hard** crabs are popular for steaming and picking for the meat inside. **Peeleers** are showing signs of the impending shedding (ecdysis) process. **Busters** have "busted" open the back of their old shell and are backing their new body out of it. **Soft** crabs are the commercially and culinarily desirable stage. This valuable stage lasts only about 3-4 hours, creating a labor intensive around-the-clock need for oversight by the waterman. The **buckram**, paper-shell stage, occurs as hardening takes place. The crab increases in size by about 1/3 as it pumps water into itself by a hydraulic process and incorporates proteins and minerals dissolved in the water into its new shell. The shedding process is soon complete and it is back to a **hard** shell.

HARVESTING

In the Smith Island, Tangier Sound region crabs are harvested in a number of ways depending on their life-cycle stage – crab-pots, trot-lines, and crab-scrapes are a few, and for this discussion, dip-netting from a skiff.
All of the skiffs have a short fore-deck used in dip-netting for swimming peelers and soft crabs. The boat is positioned at the windward end of the crabbing site so it can drift slowly downwind over the under-water grass beds in which the crabs are hiding. This creates smooth water free of ripples in the lee of the boat, allowing the waterman to see his prey beneath the surface. If there are still too many ripples, fish oil from a small bottle is sprinkled onto the water surface. This flattens and clears the surface allowing the waterman to see into the depths.

**Waterman walking forward, dip-net and fish oil bottle in hand, culling box and baskets ready to receive crabs.**

The crabber stands on the foredeck, long handled net in hand. The pole is 8' – 10' long and has a 12"-15" diameter wire hoop with a twine or wire net-bag on one end. The handle end is used to control the skiff drift and direction until the pole is quickly reversed and the net thrust into the water to scoop up a crab.

**Dip-netting for crabs and tonging for oysters from typical skiffs. In the background a skiff is visiting alongside a Hooper Island drake-tail workboat. (Eddie Somers photos)**

Caught crabs are sorted according to stage and placed into appropriate containers. Soft crabs need no further processing, they are ready to be cooked and eaten. Crabs in the other stages are brought ashore to "shedding shanties" where they are placed in rows of shallow tanks with running water and monitored, around the clock, until they complete the shedding process and are "fished up" out of the water and placed in shipping boxes. In earlier times the crabs were placed in wooden slatted shedding floats arranged in enclosed pounds and tended from a small skiff.
Tending shedding floats in a pound from a sharp-ended skiff, before the outboard motor and shedding shanty modern era. A sculling paddle rests across the near end of the skiff and float. (Photo c.1945 of Merrill Tyler courtesy of Shelly Tyler Somers, his granddaughter.)

PROPULSION

These skiffs were designed to use outboard engines. Five to ten horsepower engines were among the first to make their way to the community in the 1940s and '50s. Later, more powerful engines came along. Experience finally showed that engines of about 15-25 HP were an ideal match with the 16' skiff. Powerful enough to produce sufficient speed, small enough to be lifted on and off when required.

Detail of a sculling paddle often used for "shovin'." Also small "nipper" tongs used for shallow water oyster harvesting. A carved wooden bailing scoop is in the bushel basket.

Sculling paddles are the other power supply.

Usually made of oak, shoving and sculling paddles are about 8' - 10' long, tapering from a round handle end about 1 ¼" diameter to an oar-like blade about 4" - 6" wide and ¾" thick.

Used for sculling in deep water, a pad of wet burlap is placed over the transom to serve as a stabilizing fulcrum as there is no sculling notch. Well done by a practiced skipper, sculling, moving the angled blade side-to-side, is an efficient mode of propulsion.
Used for shoving (poling, pushing) in shallow water the paddle is pushed against the bay bottom. In this way Islanders of all ages go "shovin'" in the boats; fishing, crabbing, and "proggin'," exploring in their local waters, guts, and marshes.

**TODAY**

In 1991-1993, 136 skiffs were counted on Smith Island. Fifteen were wood, 23 were Fiberglas over wood – these all had been locally hand-made. Eighty-three were factory made molded fiberglass.

Today there are still a few traditional outboard skiffs being used in the traditional ways by the Smith Islanders. A few builders still produce an occasional wood skiff, usually reinforced and protected with fiberglass. But many now use the readily obtained and inexpensive molded fiberglass models of commercial producers.

Smith Islanders, as explained above, are quick to adopt modern technology: inboard gasoline engines in the early 1900s, outboard engines in the mid-1900s, mass-produced molded fiberglass skiffs in the late 1900s – anything to make their daily activities more efficient.

**Post script** – Recently afterschool youth boat-building programs sponsored by the Chesapeake Bay Maritime Museum in St. Michaels, Maryland, and the YMCA in Easton, Maryland have been building "Smith Island" flat bottom outboard skiffs.

==

*Tin bucket, sculling (shoving) paddle, long handled dip-net, grapnel (jigger) anchor, carved wood bailing scoop, bushel crab basket, bottle of fish oil, small oyster shaft-tongs (nippers).*
Skiff built in 1967 is 16' x 3' 6"; made fast alongside a 1991, 29' 9" x 10' 4" crab-scraping boat. (Mark Kitching photo, Smith Island, 2017)

Skiff underway with 30hp engine. Built in 2002, skiff is 17' 3" x 5' 3". (John Rodenhausen photo)

Smith Islander dip-netting for swimming peeler crabs on his skiff. (Dan Harrison photo)
Smith Islander dip-netting for swimming peeler crabs on her skiff.  (Dan Harrison photo)

REFERENCES

There are many sources of information about Smith Island and blue crabs on the internet. Listed below are just a few.

https://www.bluecrab.info/index.html gives very detailed information about all aspects of crabs.

Numerous videos of the fascinating shedding process can be found on YouTube and other sites. https://www.youtube.com/watch?v=6a7X20gfNGc (This one is speeded up.)

These two books are very worth reading.


(Pulitzer Prize winner, and one of the most important, and beautifully written, books about the Chesapeake Bay and its crab related watermen's life cycle. Curiously, Warner did not discover the importance of the outboard skiff and the dip-net fishery. He has only a brief mention on p.253.)


(On pages 130-139 Lawson gives a warmly written account of dip-netting for soft crabs when as a six year-old he accompanied his grandfather one day. All of the elements are mentioned, the environment, the crabs in all of their stages, the carved wooden water-bailing scoop, sculling paddle used to "shove" the skiff, fish-oil sprinkled over the water from a bottle with carved wooden stopper, and long handled dip-net skillfully wielded from the skiff foredeck.)

Chesapeake Bay Maritime Museum
Model Guild
St. Michaels, Maryland
July, 2019
(ERT III)
SHOTGUN

BARREL FROM 3/32" BRASS TUBING

1 1/2" 3"

1 7/8" 1/8" BRASS ROD

1/4" WOOD DOWEL 5/8" LONG SCORED FOR GRIP

CUT STOCK FROM 1/8" THICK CHERRY

TRIGGER AND GUARD OF BRASS FLAT STOCK

BOX OF SHELLS

1/16" THICK BASSWOOD GLUED AND Sanded

PACK WITH ENDS OF 3/32"
BRASS ROD AND GLUE IN PLACE
SAND ENDS FLUSH WITH BOX,
LEAVE ENDS BRIGHT

OYSTER NIPPERS

8"

2 1/8"

1/16" x 3/16"

TAPER TO 1/8"

TEETH

CUT AND PRESS 3 1/4" STAPLES

BEGIN

FINISH

1/2

3/16"
Print sheet on photo paper or heavy craft paper. Cut out basket, bottom reinforcements, template, and basket band strips. Glue two bottom reinforcements to each side of the bottom. Bend basket staves so dots are outside. Cut slots (A) in the template. Insert tabs (A) into slots (A). Adjust stave spacing evenly and secure with a tiny drop of glue. Glue the bottom band in place. Glue the outer top band in place. Carefully cut the basket free from the template. Glue the inner top band in place. Glue the middle band in place to cover the dots. Trim the basket edges as needed. New baskets are light brown/tan. Used, older baskets weather from light gray to dark gray.
Smith Island Outboard Skiff Sculling Paddle

These skiffs were designed to use outboard engines. Sculling paddles are the other power supply.

Usually made of oak, sculling/shoving paddles are usually about 8'-10' long, tapering from a round handle end about 1 ¼" diameter to an oar-like blade about 4"- 6" wide and ¾" thick.

Used for sculling in deep water, a pad of wet burlap is placed over the transom to serve as a stabilizing fulcrum as there is no sculling notch. Well done by a practiced skipper, sculling, moving the angled blade side-to-side, is an efficient mode of propulsion.

Used for shoving (poling, pushing) in shallow water the paddle is pushed against the bay bottom. In this way Islanders of all ages go "shovin'" in the boats; fishing, crabbing, and "proggin'," exploring in their local waters, guts, and marshes.

Make your paddle using a piece of wood 1/8" x 3/8" x as long as you wish it to be. Some paddles were as short as 6' but most were 8' – 10'. So 8" – 10" long would be a good size.

On the flat side draw the taper. Use a sanding board to sand away the excess until you have that shape.

Place the paddle on a flat surface and carefully sand the blade end, tapering it down as shown. Be careful to not sand the handle end.

Finally sand the handle end to a round shape.

Many paddles were painted white, many were left to weather to a natural light gray.
PLANS FOR DUCK DECOYS  1" = 1'

Step #1  Start with 1/2" x 11/16" piece of basswood (length determined by the number of decoys to be made.)  Trace side view of duck and cut into 1 3/8" lengths.  Rough out with sander, hand sand to finish.

Step #2  Trace top view of duck.  Rough out with hand sander, hand sand to finish.

Step #3  Using the end view as a guide, hand sand to round off edges. (Note the decoy is slightly bottom heavy)

Step #4  Cut out a cardboard template for the side view of the head and trace onto 1/4" basswood. With a scroll saw, cut out as many heads as needed. Hand sand to match top and side and front views. Glue finished head to body. If you make more than 1 decoy, some heads should be looking forward and some to the side. Dip decoy into sanding sealer and place of wax paper to dry. Fine sand before painting.

Step #5  If you are going to install an anchor to the decoy, drill hole and set an eye pin with glue to the breast of the decoy. For the anchor, drill a 5/16" hole 1/4" deep with a round burl drill head. Make metal eye bolts. Pour lead into the hole and set the eye bolt.

PLAN FOR HAND BAILER

Step #1  Using 3/32" basswood, cut out the 2 sides (5/8" x 1 1/4"), the back (9/16" x 9/16") and the bottom (9/16" x 1 1/4").  Glue sides to bottom. On sander, sand off excess length. Drill a 1/8 in. hole and glue the back on and sand off the excess. Install the handle using a 1/8" dowel.
PLANS FOR DECOYS

STEP 1
SIDE VIEW (ACTUAL SIZE)

STEP 2
TOP VIEW (ACTUAL SIZE)

STEP 3
END VIEW (ACTUAL SIZE)

THIS DIAGRAM ILLUSTRATES HOW THE 11/16" x 1/2" PIECE OF WOOD IS UTILIZED TRACE THE SIDE VIEW ONLY IN STEP #1.