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Air Bubbles

The Newsletter of the North Shore Frogmen's Club

March 2015

Volume 57, Number 3

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Upcoming Events

Calendar view and details on website [here](#)

Sunday Dives - Dive with a buddy!

Winter Hours: Meet at Undersea Divers, or Burger King on Rte 128 in Beverly. Check with the website or with Jim Barbara for times location and time.

Meetings:

Usually Thursdays at Palmer's Cove Yacht Club
74 Leavitt Street
Salem, MA 01970

Meetings start at 8PM; Social gathering at 7:30. See website or upcoming events section of this newsletter for presentation and meeting topics.

Upcoming special events:

See [Calendar](#) for details on all these events

March 7-8: Boston Sea Rovers



**Message from
the President
[Jim Barbara](#)**

Howdy Froggies!

Well THAT was a snow-filled February to remember! John Steinbeck once said, "What good is the warmth of summer without the cold of winter to give it sweetness?" I wonder if he ever had to shovel 100 inches of it within a 30 day period.

It was nice to end the month of February with the Boston Scuba Show where Mary Howard received The Underwater Club of Boston's Paul Revere Spike Award. Keeping so many people tethered to our community of divers by publishing the Froggies' newsletter every month for more than a decade is a big contribution to scuba diving in New England. Congratulations Mary!

And it will be nice to start the month of March with the Boston Sea Rovers Show. Once again, we will have our booth with a few Froggie volunteers to help let others know about our great club and its rich history. At Dodie's post-New Year's Day Dive Party, I talked to Jerry Sutherland, asking him what the club was like back when it started. It was all diving and catching bugs as often as you could. I guess that part has not changed. As the years went by, some Froggies found underwater photography (or maybe the

Tues March 10: NE Marine
Lecture: IMPACT OF OCEAN
ACIDIFICATION
ON MARINE SHELL-BUILDERS

Sat March 21
St Patricks Day
Party



NOTE THE CHANGE IN
DATE!!!! *Mary Howard and Ray Porter will be hosting their annual St. Patrick's Party at 529 Franklin St Reading, Ma at 4pm! Bring your beverage of choice and something to share*

More upcoming events!

Thurs March 19: State Police
Presentation

Officer Michael Lariviere and Team leader Lt. Conrad Prosniewski will be giving us a presentation on evidence recovery

Thurs March 26: Pizza Night!

Diver of the Month

Susan Copelas

photographers found the Froggies, not sure which). On the heels of that technology, tech diving made its way into the club. I look forward to letting others know about us and the fun we have both below and above the surface.

I know there was not much diving going on last month but Susan Copelas allowed us to dive vicariously through her presentation on her trip to Cuba with the Women's Diving Hall of Fame and Ocean Doctors, so I am naming Susan our Diver of the Month.

There has been so much going on over the last couple months with a few members contributing their time and effort to the club's needs. Adam did a great job leading the charge on our banquet. Adam Harnett is our Member of the Month for March.

Your Friendly Neighborhood Frogman,
Jim Barbara

**Letter from
the Editor**
[Ellen Garvey](#)



OK - I think I've **finished messing with the format** (though the tool sometimes has a mind of its own and does the unexpected). Please let me know if you have any difficulties navigating or reading, or if you have



Member of the Month

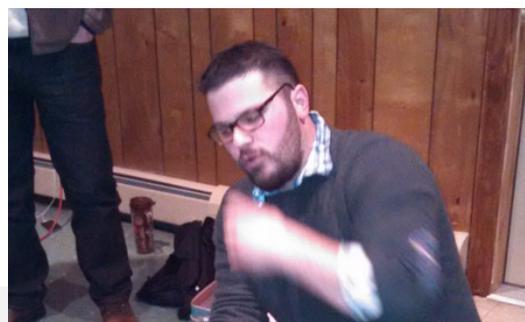
Adam Harnett



Recent Events



Richard
Simon side
mount
presentation
Feb 19



any suggestions.

Corrections to Feb issue: I listed Tony as Diver of the Month and Bill as Member of the Month. That was backwards! Also, I'd neglected to update the title of the issue to "February, volume 2". Oops!

Fair warning - the **April issue will be delayed** in getting to you since Mike and I will be doing some 80/80 diving (80'/80 degrees) on Apr 1. Actually we start the trek back that day, so give me a few days after that to get it out.

This month we start the "**Blast from the Past**" section. This is a page from the "New England Divers" catalog of 1980. I was showing the page to Tony Viera and John Sears to get them to comment, and a lively discussion of "J-valves" ensued. Mike wandered up and became interested, and proceeded to while away hours researching them! That included reading patents, discovering that they're still used for 0-vis applications, and finding that you can buy them on eBay! Check out his article at the end of the newsletter.

As always - please send me articles, pictures, recipes that you can share with your buddies. Check out **Bruce Moore's** video of manatees and **Susan Copelas'** description of "Operation 24" in this month's issue.



Please welcome Richard as an honorary member of NSF



Mary Howard receives prestigious Spike Award

On Feb 28, our very own Mary Howard received the Spike Award for her contribution as "The voice of Massachusetts Divers". But then they didn't have her speak - that doesn't seem right! Her contributions to Bay State Council as well as being our newsletter editor for 12 years were lauded.

Several members of the club were there to attend the show and witness the presentation.

She's been convinced to bring the award to the meeting March 5 so you can all see it.





Note that the link for our "North Shore Frogmen" facebook page has been updated, and we're starting over with our "followers" list - so please click the "f" above, then click "like" to follow

Welcome new member Brandon Libby

In February we voted in a new member Brandon Libby, a friend of Jim D'Urso's.



Brandon lives in Boston and was certified last April in St Croix. He's ready to try some cooler waters!

RFP for Groundfish Spawning Research Project

The Northeast Consortium (NEC) has published a Supplemental Request for Proposals (RFP) at www.northeastconsortium.org, that will give priority to --- as emphasized in motion recently approved by the New England Fishery Management Council --- groundfish spawning research projects.

Proposals must articulate a collaboration between commercial



These guys couldn't wait to get in on the action and create a "Jim sandwich" out of NSF super star Mary!

CONGRATULATIONS MARY!

NSF is Supported by



42 Water St.
Beverly MA
978-927-9551

DIVE@underseadivers.com

2015 Officers and Committees

President: Jim Barbara
president@northshorefrogmen.com
Vice President: John Sears
vp@northshorefrogmen.com

fishermen and scientists, and could include, among other approaches, research that enables the Council to improve groundfish spawning protection by increasing the understanding of groundfish spawning activity or aggregations of spawning groundfish. The NEC may also convene a working group(s) to discuss potential solutions to one or more of the recommendations listed above.

Please see the NEC's website for further details and note the proposal submission deadline is 5:00 p.m. on March 17, 2015.

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Swimming with Manatees

by Bruce Moore

Feb 25, 2015

Preparing for a dive at the Blue Heron Bridge in West Palm Beach this weekend 3 Manatees wandered into the channel. They don't stick around long and not wanting to miss the chance to be in the water with them I didn't have time to get my gear on, so I grabbed by fins, snorkel and mask and dove in. It was awesome to see these creatures up close and personal. Hope you like the video.... Stay warm!!

Here's the link:

https://www.youtube.com/watch?v=9_ULKny3E0M

Editorial Comment: We'll look forward to a presentation of Bruce and Cheryl's "winter" dives when they return north.



OPERATION 24 by Susan Copelas

GOAL to have a diver in the water for 24 hrs. WHAT?? WHAT??? How is this going to happen? Do I have to be in the water for 24hrs? Is it a tag team thing? This event was the brain child of Worldwide Christian Scuba Diving Organization that took place at Jules Underwater Hotel in Key Largo Florida to raise awareness and funds for the mission work we do both locally and abroad. Film crews showed up, The Historical Dive Museum participated as well as local churches and businesses.

I was chosen to be the first in the water and splashed down at noon as the radio announcer counted down. My first dive was spent acclimating myself to the lagoon so when I left at 3 am in the morning to catch a flight out I would know how to return to the dock. I was impressed at the little science lab they have set up which was part of the original station brought here from Puerto Rico in 1986. It is now home to an underwater summer camp program for kids. I want to be that kid!

The second structure was a "hotel". It housed 4 bunks in one chamber, a lounge and eating area in another chamber and the center chamber was all about entering and the dive arena. There is a telephone to the surface and monitors for safety purposes set up. I thought I would be claustrophobic, it was not the case. It was so cool. After a quick tour of the place and rules were spelled out, I spent most of the afternoon as a dive instructor taking people on tours around the lagoon and in the facility. We would dive by the large window and wave to the people on the inside that were skyiping and broadcasting throughout Florida as well as to a classroom at the New England Aquarium. It was all so different and super cool. As the sun set, the four of us packed our belongings in air tight containers, added weights and started our journey over to the hotel for the evening. It was quiet and serene until a half hour after arrival my stomach started growling. I must have missed the email, "bring your own food". I called to the surface to see if I could order a pizza! Surface support jumped all over

that and within an hour scuba Phil arrived with a hot pepperoni via scuba in the air tight container. Wow, I was impressed. This place was the perfect setting for the mission of the group, "to create a family friendly environment for the water lovers to enjoy the underworld, lead poor communities to a sustainable environment and connect with people that love to serve". It's one of those must things to do in your lifetime so...pack the bag, load up the car; we are going to Key Largo!!

Bay State Council of Divers Meeting

Mary Howard

Meeting held at the SSN's Clubhouse, Quincy, MA Feb 25, 2015 7:44-8:33PM

Fourteen attendees were at the meeting, including two officers and two board members.

Organizations represented at this meeting:

- MA Division of Marine Fisheries (DMF)
- North Shore Frogmen (NSF)
- Sea Rovers
- South Shore Neptunes (SSN)
- Stellwagen Bank National Marine Sanctuary

- Paul Adler Independant
- John Blackadar SSN
- Jim Brady OCA
- Steven Bonarrigo SSN
- Angelo Correnti SSN / BSC President
- Teresa Czerepica SSN
- John A. DeMasi III Guest
- Ken Hayes SSN
- Teri Hayes SSN
- Mary Howard NSF / BSC Secretary
- Matthew Lawrence SBNMS
- Vin Malkoski DMF / Sea Rovers
- Mike Vaughan SSN
- Jeannine Willis SSN

Info on Commercial trap transfers – comment period

Angelo suggests people check it out, see if you want to make comments.

White's Beach in Manchester – residential parking only all year

Whitey Baun, used to be Aqualung rep, lives in the area. Vinny and Paul Adler will check with him. We don't know if this is a town beach, or has any Federal funds.

Boston Scuba Show

Vinny and Vic said they would sit at a booth.

Boston Sea Rovers

BSC booth is ready and upstairs ready to go. Space available for booth set-up about 7:30AM on Saturday.

Paul would love do something different to get prizes for the Treasure Hunt. He has written up a letter to give to equipment manufacturers at Sea Rovers. The letter describes briefly the work of the BSC and requests donations to support the Treasure Hunt event.

Question from last year's show. Public comments have made it to the New England Fisheries Management Council; there were in the neighborhood of 200,000 comments. They are now looking at the options in the environmental impact study and weighing the comments. Expect that the Conservation Law Foundation will have a booth at Sea Rovers again this year.

Project for during heavy diving season

Angelo Correnti proposed that the BSC might run some kind of competition, such as a photo contest, or most unusual find, for which the winner would win some kind of prize at the Treasure Hunt in September. The purpose would be to generate more interest in the BSC. This is to be on the agenda for the next BSC meeting.

User survey for usage of NE water by National Ocean Planning

Matt Lawrence (Stellwagen Bank NMS) noted that SeaPlan will be running a survey: Coastal and Marine Recreational Study for New England. The survey should be online and available for individuals by some time in April. He recommends that divers complete the survey with as much dive site information as they can.

The online survey portal – will allow you to draw on a map where you like to dive (for divers) – put in all your favorite dive sites. Ultimately want to find out where people dive.

This project will go to the shoreline, whereas other projects have been for offshore sites.

It has been suggested to SeaPlan that they go to Sea Rovers to start getting the info out; not sure they will do that.

The motivation is “Ocean Planning” including wind farms, etc. There will be a map when all data is compiled. This has been underway since the start of 2015, developing website now.

Matt gave the following info for contact: Kate Longley-Wood – klongley-wood@seaplan.org The link for the site is <http://www.seaplan.org/project/coastal-and-marine-recreational-study-for-new-england/>

Stellwagen Bank National Marine Sanctuary: Matthew Lawrence

The Sanctuary put another mooring this past summer, on the Heroic, which burned and sank in 1959, and planning to put out another this year. They saw lots of big hake at the wreck.

Use of the moorings is first come first served. They consist of train wheels with 10ft of chain attached to a large mooring ball. You need to know where they are, but they can be seen with a depth finder. Need to drop divers with a line to have them tie in.

The Patriot is a modern wreck, so you can tie into it, no need for a mooring at this time. Divers were diving on this wreck this summer and a humpback whale swam by them at the bottom – 100ft.

The moorings have been funded by grants, applications written by Matt and Heather Knowles. There are three at this time.

Green Crab – invasive species.

DMF website – good article in latest newsletter

Minots Light Plaque –

Coast Guard really want to help.

Brant Rock, Marshfield

John Blackadar plans to speak with the police chief in Marshfield regarding the situation at Brant Rock beach which now has restrictions on diving. He will suggest that there could be some times that diving would be permitted, such as after 4PM.

He will wait until the snow is gone. Marshfield has taken a lot of FEMA money, so he will push to make parking available for the public.

Next meeting

April 8, 2015

Agenda item for next meeting: Proposal for a BSC competition



Meeting Summaries

Jim D'Urso, Secretary

February 5, 2015

Minutes from Adam Hartnett

1 guest and 3 officers and 19 members

Membership Committee - John Ferrier still making phone calls to past members

Program Committee

Jim Barbara went through events in upcoming weeks

Our guest Al Boudreau gave outline of boston scuba show

Old Business

Stickers - Vinny Egizi has made order

Boston Sea Rovers - Went over sign-up sheet for manning NSF booth and had handouts for presentation times.

New meeting sites

- Vinny Egizi has contacted beverly golf and tennis - Basement not available but we will know what is available by midweek of next week

- Tony Viera- Portuguese vfw available with no charge - officers and Tony will meet staff

Dive Talk

Markus - only went diving two in oahu and was there for a month. barge dive and a small corsair plane.. excellent vis mid 70s not the warmest water. He also recommends shark cage dive with galapagos and tiger sharks.

Vinny's moments - there was a newspaper report of goblin shark in net of Australia

Motion adjourn - john marren 2nd - mary h

Raffle Winners

dollars - John Marren

mystery - Peter Chapman

bug bag - Carried over until next week

Following the meeting Susan Copelas gave a presentation on Cuba and Jardin de la Reina (Garden of the Queens)

February 12, 2015

Club watched video of cave diving blue holes in Bahamas by Wesley Sykes prior to meeting

9:30 pm called to order 10 members including 4 officers present

Secretary's Report: minutes last mtg accepted

Treasurer's Report: 72 members 1 junior 32 pd members

Membership Committee: unanimous voted Brandon Libby PADI advanced certified diver as newest member

Program committee:

- Feb 19 presentation Richard Simon tech diver on sidemounts and rebreathers
- Feb 25 Bay State Council mtg Quincy
- Feb 26 reg mtg
- Feb 28 Boston Scuba Show Holiday Inn rte 1 Peabody 10 am-4 pm Mary Howard to receive spike award
- March 5 reg mtg
- March 7-8 Sea Rovers 2015

IT Committee: Markus working on sharing passwords, ideas about changing web sit, more dynamic content

Old business:

- Sea Rovers need members to man booth sign up sheet available at mtgs
- Date of bottle dive needs to be decided
- Air Bubbles Ellen doing great job always looking for input, articles, photos
- Mail chimp allows for sign up for notifications as well as
- auto unsubscribe which a few inactive members have chosen

New business:

- consent agenda discussed as possible method to make mtgs more efficient, old minutes and treasurer's report would be available to members via email a few days before mtg and print out available at mtg, and mtg would start with motion to accept minutes, pros and cons of this system discussed, officers agree to try this for a few months
- Sea Rovers
 - set up of booth by Ellen and Mike Garvey
 - Will have original Life magazine Poster and poster of recreation photo.
 - Collage and poster of reasons to join club, list of presentations for 2015 to be available for handout, consideration for videos on lap top was discussed
 - Presentation by an attendee from out of area would be appreciated if

could be arranged for mtg of March 5

- Check on passes to exhibits at sea rovers Adam to send email to Mike
- Discussion of possible new venue for mtg to be continued at later mtgs
- Facebook Vinnie will check his contact
- Voted to purchase DVD blue ray player approx 60 dollars

Dive Talk: Weather not cooperating no Sunday dive blizzard predicted

Raffles:

- Bug Bag Jim D
- Dollar box Tony V

Mtg adjourned at 10:20 pm

February 19, 2015

Abbreviated mtg

Called to order 8:20 pm 15 members 1 guest

NSF decals arrived voted 1 free to paid and life members, additional decals at \$1 each, free decals must be picked up by member at meetings

Dive talk: no diving secondary to weather

Sea Rovers: booth sign up 7 members have signed up still have more than 50% of time slots open

Events:

- wed feb 25th at Abbot Library Marblehead, lecture by marine biologist and diver Ted Maney from Salem State University comparing 25 yr monitoring of marine environment at halfway rock and Nahant ,Jim D to attend
- Wed Feb 25 Mary Howard looking for members to join her at Bay State Council mtg

Correspondence:

- metro west club inquiring if ice diving planned by NSF
- Mary Howard noted New England Fishery Management looking for proposals for ground fish spawning research go to www.northeastconsortium.org for further information

Membership:

club welcomed guest Dan Houlihan, certified to instructor level, most diving in Honduras, lives in Somerville might be interested in joining club

Meeting adjourned 8:35 pm

Raffles

- Dollar box Ellen Garvey
- Mystery prize guest Dan Houlihan

Presentation followed with Richard Simon cave diving with side mounts and equip presentation

February 26

meeting called to order 8:15 pm 12 members 4 officers

Secretary Report: minutes of prior 2 meetings read and accepted

Treasurer's report: dues are due, 73 members 33 paid

Membership:

- honorary member Richard Simon
- Dana Wilfart application received and discussed. vote tabled until next meeting pending payment of dues

Program Committee:

- Feb28 Boston Scuba Show, Holiday Inn, Peabody
- March 5 regular meeting
- March 6-7-8 Boston Sea Rovers
- March 10 Northeastern University Marine lecture Nahant 'Impact of Ocean Acidification on Marine Shell Builders'
- March 12 reg meeting
- March 19 Salem Police Dept 'Evidence Recovery' presentation
- March 21 St Patrick's Day Party hosted by Mary Howard and Ray Porter 4 pm
- March 25 Abbott Library Dr Grady 'Horseshoe Crabs' lecture 7 pm
- March 26 Pizza Party night 7:30 Palmar Cove

IT committee: Daryl to set up new Facebook page this weekend

Old business: Sea Rovers booth signup continues, life magazine recreation photo should be available from Jennifer, Garveys ready for booth set up

New Business:

- Richie Kohler presentation sat nov 7th Tony is working on expanding show

has agreement from Diver Ed to also present and tentatively 2 other presenters

- Holiday/Christmas Party discussion on changing date back to Dec, voted 2015 Party will be scheduled for Dec 5 th
- Mary Howard attended Bay State council meeting, reports White's beach has resident parking only, a new mooring buoy has been placed on wreck at Stellwagen Bank
- Jim D'Urso attending Ted Maney's lecture reports half way rock's upper 50 ft has been taken over by encrusting invasive tunicates with loss of all soft corals in upper fifty feet and many sea anemones

meeting adjourned 9:15 pm

Raffles:

- Dollar box Mary Howard
- Mystery Prize Peter Chapman

Eugenia Clark Obits

Famed marine biologist known as "shark lady" passed away 2/25/15 at the age of 92. In case you missed it, here are a couple of obits:

<http://news.nationalgeographic.com/news/2015/02/150225-eugenie-clark-shark-lady-marine-biologist-obituary-science/>

<http://www.bostonglobe.com/metro/obituaries/2015/02/27/eugenie-clark-scholar-life-aquatic-dies/q8KJvcm5qXES20atxp8xBJ/story.html>

Froggie Recipe - Mary Howard Corned Beef for St Patricks' Day

Mary has graciously shared her secrets for the fantastic St Pats party corned beef. Of course, you don't need to make it yourself since it will be featured at the **party on March 14** at Mary and Ray's house. Yum!



Corned Beef for St. Patrick's Day

When I cook corned beef for the Froggy St. Patrick's Day Party, I cook large quantities: 15-20 lbs of corned beef, about 10 lbs of potatoes, 5 lbs of carrots and three large cabbages. Scale yours down to numbers that work for you.

Ingredients:

- Purchase the "red" corned beef that is on sale at the grocery store. It comes with a packet of spices to use in cooking, and directions for cooking.
- Carrots, peeled and cut into 2" pieces
- Potatoes, peeled and cut in halves or quarters
- Cabbages, cut into about 8 wedges each

Simmer the beef with water to cover, in a large pot. Include the spices in the water. Simmer for about three hours (or as per the instructions on the package), adding water if needed to keep the beef essentially covered. It will float some, so turn it occasionally with a fork to make sure all parts are cooked evenly.

When it has cooked as long as desired, and is fork tender, remove the beef from the water.

SAVE THE COOKING WATER for cooking the vegetables.

Put the carrots in the water and boil/simmer for a couple of minutes, then add the potatoes and cook 15-20 minutes until done. Remove potatoes and carrots from the water.

Add the cabbage wedges to the water and cook for about 5 minutes. Be careful not to overcook. Cabbage is better underdone than overdone.

Slice the corned beef and serve with the vegetables on a large platter.

Have good mustard available for those who like it.

Blast from the Past

From the 1980 "New England Divers" catalog

ALUMINUM CYLINDERS

U.S. DIVERS ALUMINUM TANKS

U.S. DIVERS 80 cu. ft. Professional provides up to 12% increase in diving time over the standard 71.2 cu. ft. cylinder. The 80 cu. ft. Professional has a 3.8 pounds positive buoyancy when empty, 2.2 pounds negative when full. Reserve valve retains a 300 P.S.I. air reserve. Pullrods included on all "J" valves. 3/4" thread. THE EXCLUSIVE, U.S. DIVERS' EXCLUSIVE CONSUMER PROTECTION PLAN AND ONE-OWNER LIFETIME LIMITED WARRANTY. RATED FOR 3000 P.S.I. SERVICE PRESSURE.

- Single 80 cu. ft.
 - 0745 Yellow with J Valve Retail \$218.95
 - 0749 Yellow with K Valve Retail \$189.95
 - 0763 Black with J Valve Retail \$218.95
 - 0764 Black with K Valve Retail \$189.95
 - 0760 Blue with J Valve Retail \$218.95
 - 0781 Blue with K Valve Retail \$189.95
- Twin 80 cu. ft. (w/J Valve)
 - 0758 Twin Yellow with Reserve and Pack . Retail \$547.00
- Single 50 cu. ft.
 - 0750 Yellow with J Valve Retail \$206.95
 - 0751 Yellow with K Valve Retail \$189.95
- Twin 50 cu. ft.
 - 0762 Yellow with J Valve only Retail \$447.00

SHERWOOD ALUMINUM TANKS

SHERWOOD SELPAC ALUMINUM TANKS. 80 cu. ft. capacity, has a hard-coat epoxy enamel finish w/primer undercoat. Has a 7.25 diameter, 1/2 thread valve opening. Each cylinder features, 2.2 pounds negative buoyancy when full and 3.5 pounds positive buoyancy when empty. Rated 3000 PSI. With the purchase of any scuba tank from New England Divers you will receive an air card which is good for lifetime Free Air at all New England Divers Stores.

- | | |
|------------------------------|------------------------------|
| Retail | Retail |
| Blue J Valve . . . \$218.95 | Blue K Valve . . . \$199.95 |
| Yellow J Valve . . \$218.95 | Yellow K Valve . . \$199.95 |
| Black J Valve . . . \$218.95 | Black K Valve . . . \$199.95 |
| White J Valve . . . \$218.95 | White K Valve . . . \$199.95 |



STEEL CYLINDERS

NEW ENGLAND DIVERS LIFETIME STEEL CYLINDER GUARANTEE

New England Divers tough molybdenum-steel cylinders meet or exceed every D.O.T. requirement for high pressure vessels. Interiors are sandblasted clean to preclude concentration of corrosion from moisture. Rated for 2475 P.S.I. service pressure. 3/4" thread. Pullrods included on all J valves. WITH THE PURCHASE OF A NEW ENGLAND DIVERS CYLINDER YOU WILL RECEIVE AN AIR CARD WHICH IS GOOD FOR LIFETIME FREE AIR AT ALL NEW ENGLAND DIVERS STORES.

- Single 71.2 cu. ft.
 - 6720 Galvanized with K-Valve Retail \$220.00
 - 6730 Galvanized with J-Valve Retail \$233.50
- Twin 71.2 cu. ft.
 - 6700 Twin Galvanized with Reserve and Harness Retail \$569.50

PONY BOTTLES

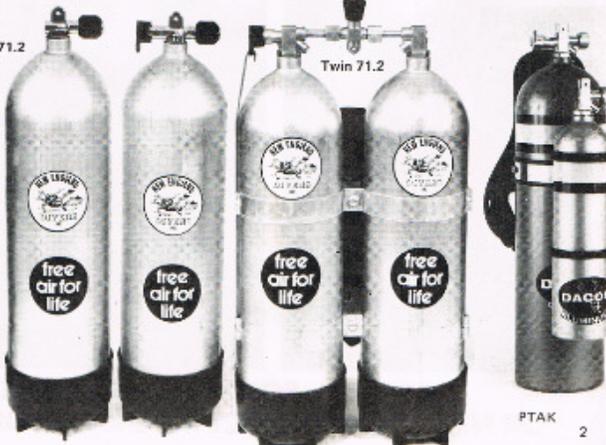
DACOR ALUMINUM PONY BOTTLES

DACOR ALUMINUM PONY BOTTLE. Increase your diving safety. Add an aluminum pony bottle as part of your emergency back up system. A "flow restrictor" K valve taps off almost 15 cubic feet of additional air. 2015 P.S.I.G. Length: 16.5 inches. Diameter: 4.4 inches.

- PTAK Aluminum Pony Bottle Retail \$110.00
- DACOR MODEL PT102. Pony tank bands and attachment bracket locks-in Model PTAK on most back pak tank retaining bands up to 5" in width. PT102 Retail \$12.00

HOW TO GET WARRANTY INFORMATION

Many of our items carry a specific written warranty. This is included with the merchandise when it is shipped. However, government regulations require that we send you a free copy by mail if you should care to read it before placing your order. To obtain your free copy of any such warranty, send the catalog number of the item, with your name and address to: New England Divers, Warranty Dept., Tozer Rd., Beverly, Mass. 01915 . . . or your local store.



The Constant Reserve Valve ("J-Valve") and How it Works
by Mike Garvey

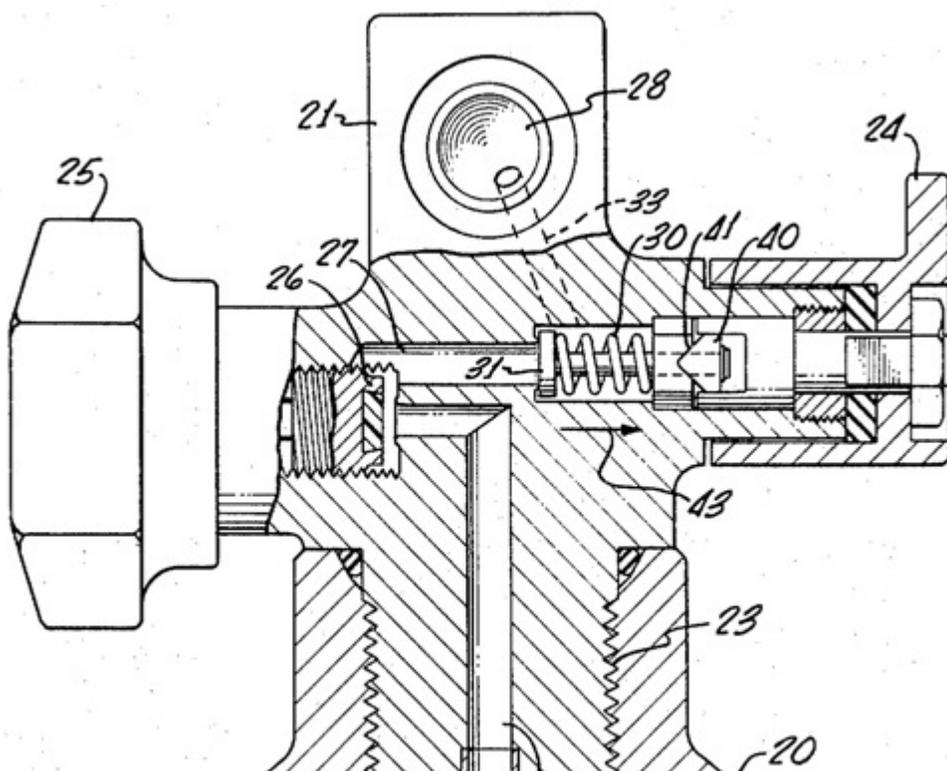


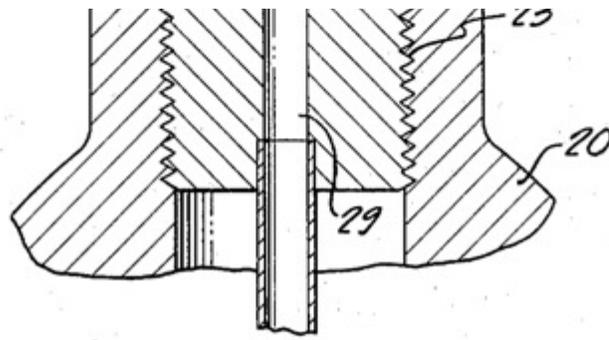


The first workable compressed air SCUBA was invented in France in 1862, and was patented in 1865; this was developed by a mining engineer as a method for escape from flooded mines. In 1943, Emile Gagnan and Jacques Cousteau created the Aqua Lung, a compressed air SCUBA operating automatically on demand; the Aqua Lung became available in the US about 1953 and sold for \$160 (approximately \$1,400 in 2015 currency). This package included tank, regulator and J-valve.

How does the J-valve work? We likely all know how it is/was used: a dive proceeds and as the air supply runs low, the diver senses a resistance to inhalation. By pulling the reserve rod to rotate the J-valve, the diver provides an additional source of air to complete the ascent to the surface.

A mechanical drawing of a typical J-valve is shown below. The operation of the valve is as follows: a poppet valve, 31, is held in the closed position by a spring, 30, unless the pressure in the tank exceeds (typically) 300 psi. At the start of a dive, the tank pressure exceeds 300 psi and the poppet valve is forced open, allowing the diver to use air (through subsequent regulators) for breathing underwater. When the tank pressure falls to 300 psi, poppet valve 31 restricts, but does not choke off, the air flow to the diver. The diver rotates the reserve handle arm, 24, which releases the force of the spring, allowing the poppet valve to open fully.





Interestingly, this function is technically a "constant reserve valve" but became known in the industry as the "J-Valve" because of the catalog designations used. There are/were also R valves (as story for another time) and K valves (which we use today).



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