

# Domar & Canyon Inflatables

by Herm Hoops ~ 2013

In his book “Canyon,” Michael Ghiglieri referred to Domar as the Maserati of rafts.(6) It is difficult to not be upright at the foot of a rapid with this raft. Domar, a classic yellow boat, was designed and manufactured in Northern Italy since the 1940s by Senor Dorati. Domar is a combination of “Do” from Dorati’s name and “mar” short for the Italian word for sea which is mare. In other words, Domar is short for “Dorati of the Sea.”(12)(#o.)

Domar had a proud tradition of quality in the inflatable boats they manufactured in a little town in Northern Italy called Santa Maria Hoe, about an hour north of Milan at the base of the Italian Alps.(#p.) Dorati set the World speed record for an inflatable boat on nearby Lake Annone.(10) Dorati’s factory was just an ordinary looking stone, stucco plain building with an iron gate and a small courtyard. While visiting the factory Gary Harper was sitting in the waiting room one day, lost in thought when he realized that in the floor tiles decorated with little swastika’s.(16)(#m.) During World War II it appears the Dorati family produced inflatable boats for the Italian and German armed forces.(15)

Senior Dorati and his son Paolo produced a line of inflatable dinghies, transport, racing and white water river boats until the 1990s. Their boats had excellent design, construction and handling. Brothers Francesco and Iacopo (pronounced Jacapo) Mazzei, family friends, acted as export brokers and salesmen for the company that manufactured Domar Inflatables.(#v.) For years Domar was synonymous with inflatable boats in Europe, Asia and Africa. The model names reflect some of the most challenging rivers on the planet: The Zambezi, Indus, Omo, Bio Bio, Blue Nile and Watut.(#c.)

George Wendt, the owner of OARS(#a.) was a founding member and partner of the original Sobek Adventure team.(#t.) Richard Bangs and John Yost ran Sobek out of the OARS office in Angels Camp, California. The OARS catalog in 1979 was actually a joint OARS/Sobek catalog.(13) In the mid-1970s Mike Walker worked as a boatman for Hatch River Expeditions in Dinosaur National Monument, and by 1979 he began work in Flagstaff for OARS in the Grand Canyon.

Rich Bangs and John Yost had just ran the uncharted waters of the Blue Nile River in Africa. They were on a 30 day expedition that was to be their last adventure after college before entering the world of work, when they ran into some Italians who were just putting on the river. The Italians had some yellow sport boats with transoms to mount a motor on the back. The workmanship looked good and Bangs and Yost said: “jeeze, these are good looking boats, would you guys be interested in making river boats.” They exchanged business cards with the Italians.

{Numbers in parenthesis (1) are REFERENCES; letters in parenthesis (#a) are described in SIGNIFICANT NOTES.}

When Bangs got back to Angels Camp he told George Wendt about the Italians and the yellow boats he saw in Africa. George took an interest in the boats and he called Mike Walker to develop a strategy to establish a business out of importing some of the boats. OARS needed rafts for their overseas trips and for the expansion of different trips they were running in the United States. Mike began sketching some designs and Domar shipped several prototypes over for them to look at.(13, 14, 21) The prototypes were pretty rough and Mike fine tuned the specifications for the Zambezi and other models and then visited the factory in Italy to finalize details like d-ring and wear pad placement on the boats.(21)

When the Domar people came to Angels Camp, Sobek was there, but didn't take an interest in the project. George Wendt remembers that the deal was all verbal, with handshakes and OARS had the exclusive contract for importing Domar rafts.(13) Wendt was attracted by Iacapo's suggestion that they could give OARS a boat at a lower cost than the Avon rafts they were using. George remembers, "I believe they said, in order for you to get this boat we need to increase our volume. I think the boat they brought us was yellow, and we loved it. I was pretty good friends with the Avon distributor and I told him that we were thinking about leaving Avon. He said: George why would you do that? And I said: number one we can get a lower price, and number two because they'll make a yellow boat. We went back and forth, and he warned me about the Italians, because his daughter was married to an Italian."(13) "We had bought a lot of Avon rafts up to that point and the Avon representative was a real nice guy named Tom Martin. He said: George have you had any experience with Italian cars? And I had an Alfa Romero, and he said so tell me about the car. I said it keeps blowing head gaskets. He said you know the reason for that is because they won't put the extra \$3 into a better head gasket, so they keep blowing out head gaskets. He said: The Italian boats, Domar, had excellent fabrication, but they cheapen the boat by putting in a little less costly Bridgeport valve. They didn't want to pay for the military valve. But it was made in our color and the workmanship was excellent."(13) By 1983 OARS was the sole distributor of Domar inflatables and began advertising the Zambezi, Blue Nile and Omo in its catalog.(13)(#d)(#r.)

George and Mike started going to East Coast trade shows with their Domars to break into the market. In 1982 Gary Harper had rowed a baggage boat for OARS in the Grand Canyon. Gary returned to Tennessee to start a small inflatable boat repair business and guiding on the Ocoee River. At one of the Eastern River Outfitters Association meetings George and Mike met Gary and the three men hit it off. In September 1983 Gary Harper (Man of Rubber) became the Eastern U.S. sales representative for Domar river boats.(1,12,13,14,16) By 1985 the Idaho Outdoor Equipment Company in Boise, Idaho was distributing Domars.(2) Around 1985 OARS began replacing its fleet of Avon Spirits with the Domar boats.(13) OARS used the Domars in their American operations, in Chile and Indonesia and where SOBEK was operating.(13)

By 1985 OARS and Mike Walker had spent several years with Domar building boats. Mike designed the specifications, including the length, width, tube diameter, inside beam, d-ring placements, and thwarts for new models. The factory in Italy did the pattern cutting and production of the boats.(14) Mike came up with the designs and names for the Zambezi, Blue Nile, Omo, Bio Bio, and Indus. Gary Harper designed the Alas model.(10,14)(#c.)

Communication with Italy was all done with Telex.(#b.) Part of the challenge was that OARS was communicating in English with Domar by Telex. English was not the common language of Italy and sometimes the people at Domar misunderstood what Mike and George were trying to say. “They couldn’t afford to call us and we couldn’t afford to phone them. It was sort of this staccato communication by Telex. Telex had peculiarities, you had to type in a certain order in order to get it to go to their address. It was much more complicated than the communication systems that we have today. So language was a barrier. I can’t say that Iacapo didn’t speak English, but it was not his native language and it was almost like Iacapo used this to his advantage because he could act like he didn’t know what we were talking about.”(13)(#v.)

Besides the language barriers and cumbersome Telex messages there were other obstacles in working with the plant in Italy. Wendt had to provide a letter of credit from an international bank. So they had to get a bank intermediary for a foreign shipment of gear that was valued at one-hundred and seventy five thousand dollars. OARS had to put in their terms of agreement that the Bank of America would release the money to Domar when the product was received and checked out by OARS.(13)

In addition, OARS was required to use a middleman, Michael Brode, who ran Executive Bloodstock based in New York City.(#e.) Brode was the middleman between U.S. OARS and Domar Italy in production and importing and George believes that he was somehow a friend with Iacapo.(13) Mike Walker remembers, “The challenge, looking back, was we were always trying to negotiate the price, and there was an intermediary named Mike Brode who was getting his cut. I think he was actually determining the prices. So we had this gate keeper working for the company in Italy. We found that very frustrating because we were trying to establish a manufacturing relationship with the Domar people in Italy. We couldn’t get direct contact and he was handling importation of the boats. I think Domar was under funded and they were looking for better ways to fund their raw materials, we were doing so much to make it happen, providing letters of credit that were very difficult to acquire from the banks.”(8,14)

With the challenges of trying to communicate and the complexities of using the Telex machine it was easy for misunderstandings and for things to get mixed up in translations. Senior Dorati would say one thing and if he couldn’t get the material or whatever he would just use what he had. The material that Domar used was a polyester based cloth covered on the outside with Hypalon and neoprene on the inside. The neoprene was a superior air retention coating but it didn’t have much abrasion resistance. Hypalon had excellent abrasion qualities on the outside of the boat. Once OARS received a batch of boats that was supposed to have the heavy duty floor material but they ended up having the neoprene tube material on the floors. Dorati had turned the neoprene side of the material on the bottom of the floor. Within a month or two they were starting to see the fabric wear through. Walker and Harper had some challenges correcting the problems with the floors, installing wear pads or replacing the the floors.(10,14) Complicating the matter was that Dorati, through Iacapo was demanding payment and Wendt was insisting on a compensation for the error. In a letter dated 1987 to Iacapo, Walker wrote: “I’m very anxious to resolve our differences and I’m very distressed that our relationship has come to this. Furthermore I will promptly forward Tecno Boats payment.”(17)(#f.)

Domar's service was falling apart, they didn't make deliveries on time and Walker was funding the manufacturing by taking deposits from customers. He would get deposits at the winter trade shows then place an order with Domar. Dorati didn't have the funds so Mike would have to fully collateralize funds or provide bank letters of credit. Walker and Wendt were doing what they could to make it work with the underfunded Italian operation. There were continual production delays, the boats were getting delivered late which caused sales to drop and customers to become frustrated. "The customers would say hey the season is starting, I need the boats and you've got my deposit." There were some workmanship issues from time to time, and that's when Wendt and Walker eventually realized that they could do more by manufacturing their own boats, trying to get the costs down for OARS, so they could remain competitive in the markets. The imported boats were always a little bit pricy and it was challenging to market them.(14) By 1988 OARS parted company Senior Dorati and the Italian built boats. Dorati kept building boats for a while, probably going back to their roots: yacht tenders and sport inflatables for the European Market.(12,13,14,18)(#k.)

Walker went to the Muto Company in Seoul, South Korea looking for a new manufacturer. Walker recollected: "It was interesting when I got there, the next morning they were showing me the factory and I saw a Domar in one of the working bays! It appeared they were using it as a pattern. They escorted me to another part of the factory pretty quickly at that point. I learned later that SOTAR(#n) was also talking with Muto and SOTAR may have ended up using the Zambezi as a pattern for their big boats, but I never pursued it."(21)(#g.)

Mike Walker had the Domar design plans and he started making rafts.(8,9,10,12,14,15) Around 1988 Mike found a couple of brothers in Tucson, Arizona who were making sport boats with transoms under the name of Polimax in a couple of 20' by 60' warehouses. Walker met with them and had them build several prototypes to check out their workmanship and ability to build boats. They built boats for Mike for one or two seasons but they had no money and their production was late so it was the same deal - Mike had to finance the production. "One of the kids who worked in the factory pulled me aside one day and said we should build these ourselves in Flagstaff. We started talking and the next thing I knew, I (1990) had rented a warehouse in Flagstaff.(#s.) We started building boats and I started placing orders for fabrics, valves, adhesives and other material."(21, 22)

In the spring of 1990 Mike Walker began production of Domar-like boats, and other items under Canyon Inflatables in Flagstaff, Arizona. When Mike began manufacturing the rafts in Flagstaff the quality improved and delivery dates were met. Canyon Inflatables was the primary supplier to OARS, but many other outfitters and government agencies also bought them. Many of the Canyon inflatable boats have continued in outfitter and private river runner service for over twenty years.

Making cold glued boats doesn't require much: cutting tools, buffing tools and rollers. Walker's operation cut the fabric by hand and also used an electric cutting knife. They stacked five or six pieces of fabric and cut them at one time so the pieces were identical. They hand buffed with buffing wheels on drills and glued with hand brushes using Bostick and Stabond.

The adhesive was purchased in 55 gallon drums. The employees would put a 55 gallon drum of adhesive on its side, put a hose on the bottom bung hole, and use the top bung hole as a vent. They would decant the glue into quart size containers so that it was easier for the employees to handle. When the adhesive became low in the drum was pretty viscous. “We were going gung ho, we actually had a good year in 1994, we had a lot of orders and we were building boats. We had about 15 boats in production, which was about all the warehouse I was using could hold. The boats were inflated, so we were at that final stage of production, adding rub rails and d-rings.”(21) While Mike was up at Glen Canyon Dam with his daughter’s third grade class trip, Mike was informed that he had an emergency phone call. It turned out that a 55 gallon drum of adhesive had exploded seriously injuring a worker.(#i.)

As a result of the explosion the crew was pretty shell-shocked and they were all ready to just get the hell out of there. Mike talked to two or three of them individually and said: “You know we need to just finish up this production and get it them delivered. The boats were 80% done. I had 50% deposits on most of them and the money was spent on the material so I really had no choice. I had to get these boats out to the customers.”(21) It turned out a lot of the boats were going to OARS and to Bruce Helein’s Canyon PRO.(#w.) Two or three of employees agreed to come back and Mike hired a couple of others and finished up the boats.(14)

“It was interesting, before the accident I was coming to the conclusion that I just didn’t have the economy of scale to really make the manufacturing business viable. The PVC boats coming on the market were less expensive to make and they had inflatable, self-bailing floors which people wanted. I could not come up with an inexpensive inflatable floor to compete with them. It was always nip and tuck. I was making a few dollars on it, but nothing compared to the effort of importing fabrics, valves and glues. To really make it viable, to earn a good wage and to pay your employees well and to actually have a marketing campaign, you needed to turn out around 200 boats a year. The most I ever did was 100 to 110 boats so I was just not there. I didn’t have the funds to do the marketing I felt like it needed to get up to that level. I was naive and young and the idea of borrowing money to market with was too scary. I was just financing it with the internal cash flows.”(21) “Once we got those boats out I made the decision to go ahead and close it up, I was kind of going down that road before the accident. I finally closed the shop in the fall of 1995.”(21) (#r.)

Mike sold some of the supplies and materials to Canyon Pro and OARS. He had a little store called Canyon Supply, and he sold fabric and other items through the store. He sold some of the stuff to an upholstery shop in Flagstaff called the Summit, owned by Tony and Ann Anderson who were also guides with OARS. Bruce Helein bought a few oddball pieces and “some of it just kind of disappeared or was given away.”(14)

“In 1998, through the course of managing the OARS Grand Canyon operation for ten or fifteen years and working with the bankers and starting my own little company making boats and outdoor supply store I got real interested in business. I had not yet finished college, I started college when I was 18 and then I got into river running and that took over my life for the next twenty years. In my mid-40s I went back to college and finished my undergrad degree. Then I went on and got my M.B.A. I guess I was just looking for a different direction to go. I had ambitions of having a river company and the boat manufacturing thing just couldn’t make it happen. After an ten year effort I threw the towel in on it. I sold my Canyon Supply business. After I got my M.B.A. I thought, now what am I going to do?”(14) (#j.)

The Domar boats are a river legacy and many outfitters used them for decades. Domar used Kleber 6934, a tri-layered fabric of French origin.(#h.) The exterior is 80% Hypalon, a strong, abrasion resistant coating. It has a base fabric of 1200 denier polyester which produces a stiff boat. The inside coating was Neoprene, which is an excellent air holding compound.(3) Custom colors could be ordered, but the classic Domar color was yellow.

Both Domar and Canyon Inflatable boats came with a five-year warranty. They boats were produced by hand using cold adhesion under pressure to prevent fabric delamination. Domar and Canyon Inflatable boats were non self-bailing or “bucket boats.” A wide strip of “V” tape was used to secure the floor and protect the seam from abrasion and sand. Domar (Italy) in the early days of their relationship with OARS came up with a prototype self-bailer. A six-inch tube underneath the standard floor along each of the long side tubes. Domar thought the tube would elevate the boat enough to drain the water through holes the edges of the floor. Walker took it down the Grand Canyon on a test run with Tony Anderson, but the boat just didn’t pivot or turn very well and that was the end of the Domar experiment.(21) Canyon Inflatables experimented with self-bailing inflatable floors using drop-stitch fabric just before they ended production. They built several prototypes, but they were mainly conversions of other manufacturers floors.

Early Domar boats used stainless steel or aluminum, Italian-made Bridgeport valves.(11,21)(#q.) After several years Walker changed the valves to PAM valves, the same as was being used on Demaree Inflatable Boats. Polimex used Halkey-Roberts valves in their manufacturing, but changed over to the Leaffield A-7 valves made in England. Eventually Canyon Inflatables settled on the Leaffield B-7 valve.(21)

The Italian manufactured models, and similar Canyon Inflatable models were:(2,10,21)

	<u>LENGTH</u>	<u>WIDTH</u>	<u>TUBE DIAM</u>	<u>WEIGHT</u>
Watut	12'	5'10"	17"	80#
Alas	14'	6'	18"	95#
Blue Nile	14'	6'10"	19"	110#
Bio-Bio	15'	7'4"	20"	120#
Omo	16'	7'8"	22"	125#
Indus	16'8"	7'6"	21"	140# (#u.)
Zambezi	17'9"	8'4"	24"	150#

In 1984 the Blue Nile Model sold for \$1,854.(4) The Blue Nile was a great boat for oar powered trips and was well suited for wide rivers, but it was too wide for the typical Eastern river and the bow was much too flat. Both the Blue Nile and the Alas were 14 feet long, but Gary Harper could not sell a boat as wide as the Blue Nile in the East.(10) Harper created the Alas design as a paddle boat for Eastern rivers, especially the Ocoee River in Tennessee. “It was 14' long and only 6' wide and had a substantial amount of “rocker”... 30” if I remember correctly.”(10) The Alas had three thwart which created compartments small enough for the guests to lock themselves into the boat and allowed the guide to normally carry six to seven guests. The middle Ocoee in TN drops 270' in 4.6 miles so it is pretty continuous Class III and IV rapids. In the days before self bailing boats... they had to be designed to ride up and over the waves instead of just plowing into them.”(10)

Around 1984 Walker called Hatch River Expeditions and talked to Barry and Don Hatch about buying some new Domar boats. Russ Perry asked if Hatch would order him one of the Domars to get the outfitter discount on it. Don Hatch ordered a white Zambezi for Hatch and the Omo for Russ Perry.(11) The Hatch River Expedition Domar was used on the Middle Fork of the Salmon and later Cataract Canyon on the Colorado River.(4,11) Barry Hatch felt that the Domar was well made, the seam tape adhered good with no peeling and the fabric was durable. The stainless steel valves (no corrosion) were recessed into the tube, and the valve had a rubber dust proof valve cap held on by a rubber hinge.(11)(#q.)

In 2012 Ceiba Adventures, a Grand Canyon raft rental company was still advertising their Domar Zambezi bucket boat to customers.(5) In 2006 Grand Canyon commercial outfitters Arizona River Runners and Tour West, Inc. were using Zambezi's.(7) In 2012 a Domar Zambezi sold for \$950 on the Mountain Buzz Website. For a number of years Sheri Griffith Expeditions used two Blue Nile paddle boats and two Zambezi oar rigs in Cataract Canyon and Westwater Canyon on the Colorado River. Other outfitters that used Canyon Inflatables were Halander Expeditions, Class VI, The River Man, Eastern River Expeditions, Cripple Creek Expeditions and Sunburst.(#g.)

Even though “bucket boats” have gone out of vogue many people still own and operate the sturdy yellow boats. Paul Lauck has a Bio Bio and an Omo, he thinks so highly of them that he recently (2011) bought an 18' Canyon Inflatable as well. Domar's superior construction and quality make them great high-water boats despite the high kick on both ends. The spin on that design was that it "increased the fun-factor," because the broad, snubbed ends seemed to take in more water than Avon and other inflatables. They were yellow, and they didn't heat up like darker boats and the bright color made them more photogenic.(8)

Dorati's Domars were durable, high quality boats that met the challenges of heavy water in big drop rapids. They, and the later Canyon Inflatables rowed lightly on the water with heavy loads and they were a pleasure to row. Looking back from today, when boats are designed on computers by college-educated engineers, when the fabric is cut with computer controlled programs on a CAD cutter, and when the boats are assembled by low-wage, foreign labor - Mike Walker's Canyon Inflatables were obviously a labor of love. Walker's boats were produced with hands-on people who knew the rivers because they were people who ran them as an integral part of their lives. These "old-school" boatmen built a solid, much sought after river craft that carried more than gear and people down the river. They were the boats that floated the heart and soul of their builders, floating gracefully on the water like the melodic song of the canyon wren floats across a canyon breeze.

### **REFERENCES:**

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- (2) 1985 Idaho Outdoor Equipment Co. Catalog, Boise, ID; Collection of Herm Hoops;
- (3) Kleber Textil, Waldgartenstr. 25 68642 Brstadt, Germany; Phone 49.(6206) 60 91;
- (4) Herm Hoops;
- (5) Ceiba Adventures - River Outfitting Services Website; Ceiba@ceibaadventures.com;
- (6) Canyon; Michael Ghiglieri, Univ. of Arizona; 1992; ISBN: 0-8165-1258-2;
- (7) Grand Canyon River Management Plan; 2006; Appendix C; Page 2, Commercial Operating Requirements;
- (8) Paul (Zeke) Lauck, email to Herm Hoops; 10/20/2012;
- (9) George Wendt (OARS), email to Herm Hoops; 10/14/12;
- (10) Gary Harper, **Man of Rubber**, email to Herm Hoops, 10/12/12;
- (11) Barry Hatch, email to Herm Hoops, 10/26/2012;
- (12) Gary Harper, **Man of Rubber**, email to Herm Hoops, 10/31/12;
- (13) George Wendt (OARS) Interview with Herm Hoops, Angel's Camp, CA; 1/25/2013;
- (14) Mike Walker (OARS) Interview with Herm Hoops, 2/18/2013;
- (15) Dr. D. Roberts, CIV USA TRADOC email to Herm Hoops, 3/20/2013
- (16) Gary & Beth Harper, **Man of Rubber**, Interview with Herm Hoops, 2/7/2013
- (17) Copy of letter provided to Herm Hoops by George Wendt
- (18) Mike Walker email to Herm Hoops; 9/1/2013
- (19) Mike Walker email to Herm Hoops; 9/2/2013
- (20) Zeke Lauck email to Herm Hoops; 9/7/2013
- (21) Mike Walker revised notes on interview to Herm Hoops; 9/8/2013
- (22) Letter from Michael D. Fahey to Mike Walker; 1/18/1990; provided to Herm Hoops by Mike Walker
- (23) Gary Harper email to Herm Hoops; 9/10/2013
- (24) Mike Walker email to Herm Hoops; 9/11/2013
- (25) Gary Harper email to Herm Hoops; 9/15/2013
- (26) Po Chang, U.S. Coast Guard, Office of Auxiliary & Boating Safety Branch, (CG-BSX-23) ([Po.L.Chang@uscg.mil](mailto:Po.L.Chang@uscg.mil)) email to Herm Hoops; 9/27/2013

## **MISCELLANEOUS:**

- Domar Hull Serial Number: ARN (19)
- Canyon Inflatables Hull Serial Number: YON (19, 26)
- *Boatman's Quarterly Review*; Volume 28 #4, Winter 2015: "George Wendt." pages 26-43;

## **SIGNIFICANT NOTES:**

(#a.) OARS stands for Outdoor Adventure River Specialists. Pam Wendt came up with the name O.A.R.S. in 1971. They were originally under the name Gooch-Wendt in 1969 -1971 and they first used the name O.A.R.S. in 1972.(13)

(#b.) The telex network is similar to a telephone network that sent text-based messages. This network provided the first common medium for international communication. Telex began in Germany as a research and development program in 1926 and became operational in 1933. The service was operated by the German Federal Post Office and had a speed of approximately 66 words-per-minute. In 1958, Western Union started to build a telex network in the United States. The network started as a satellite exchange located in New York City and expanded to a nationwide network. Teleprinter equipment was originally provided by Siemens & Halske AG and later by Teletype Corporation. Initial direct international telex service was offered by Western Union, via W.U. International, in the summer of 1960 with limited service to London and Paris. In 1962, the major exchanges were located in New York City, Chicago, San Francisco, Kansas City and Atlanta. The telex network expanded by adding the final cities of Los Angeles, Dallas, Philadelphia and Boston in 1966. Telex grew around the world very rapidly as a method of international communications. To have a Telex machine in the little town of Angels Camp was fairly novel. OARS was ahead of the banks in Angel's Camp in the ability to communicate internationally. Eventually OARS got one of the very first fax machines in Calaveras County and their tiny building was the hub of a lot of activity, including OARS and the international company SOBEK Expeditions.(13)

(#c.) According to George Wendt, Domar apparently came to OARS in 1983 with the names for Zambezi, Omo and Blue Nile - the names were of rivers that SOBEK had begun running. The Domar people had probably gotten the names of the Zambezi, Omo and Nile from a SOBEK catalog. Actually Mike Walker came up with the names except for the Alas who was designed and named by Gary Harper.(13,14,21) Harper designed the 14' Alas (sold primarily in the Southeast US and West Virginia) and the 17.5' Indus (sold primarily in West Virginia, New York and Maine) and he was working on new 13' and 12' designs that were to be narrower and have more kick on both ends for Eastern rivers. "The new designs were to be similar to the differences between the Blue Nile and the Alas which were both 14' long. The Blue Nile was 6' 10" wide, had a low kick, two thwarts and it was designed to compete with the Avon Adventurer which was primarily sold in the Western US and usually used as an oar powered boat and occasional paddle boat. The Alas was 6' wide, had a very pronounced kick to both ends, had three thwarts and it was designed to compete with the Avon Ranger which was primarily sold in the Eastern US and primarily used as a paddle boat to carry 6 or 7 guest and a guide. Domar Italy never built the 13' design but did build one prototype for the new 12' design which Gary Harper purchased from Domar USA around the time that Domar Italy was going south. Gary still has this 12' Domar which he and Beth still use for their occasional Ocoee trips."(23)

(Zambezi River - Africa below Victoria Falls; Omo River - Southern Ethiopia; Blue Nile River - Ethiopia; Indus River - India; Bio Bio River - Chile; Watut River - New Guinea; Alas River - Indonesian Archipelago, Sumatra)

(#d.) The yellow colors came about later as OARS used gray rafts for many years. They first used surplus and Rubber Fabricator Green River models through Ron Smith. In the 1970s OARS began using Avon rafts. George Wendt asked Avon to make yellow rafts and they were unwilling to make them. "OARS had bought a lot of Avon rafts up to that point and the Avon representative a real nice guy, Tom Martin, gave me some disclaimers about Italian made products. But the boats were made in yellow which OARS had adopted, and the fabric and boats were of excellent workmanship."

(#e.) Michael Brode's primary business was horse breeding. He had a company called Thorough Bred Stock, and he was basically a breeder of race horses. Michael Brode operated as a broker under name Executive Bloodstock and he was based in New York City. Brode subsequently changed the name to Arno Corporation. He was the middleman between U.S. OARS and Domar Italy and he was somehow a friend with Iocapo.(13)

(#f.) It was not uncommon for Italian companies to change their names on a regular basis. In much of the correspondence to George Wendt Senior Dorati referred to the company as Tekno Boats. Gary Harper said: "From what I gather from Franchesco and Iacopo it wasn't all that uncommon for Italian inflatable manufacturers, of which there were lots of them in the 1980s, for them to make a different name and make a little different quality boat."(14,16)

(#g.) At some point Mike Walker may have sold a used Domar raft to a company called Muto, a Korean Manufacturer. {Muto International Company Ltd. In Seoul, South Korea provides PVC, Chemical, Artificial Leather, Consumer Electronics, Electrical Equipment, Secondary Steel, Used Computer, Fashion, PVC Foamboard, Sand Paper, and related products - 2013} Apparently Muto wanted to take the boat apart and probably manufacture it for SOTAR. OARS began running river trips in Fiji in 1998. At that time SOTAR's Glen Lewman was trying to establish manufacturing in Fiji, which was part of the British Commonwealth. SOTAR could then sell boats to Australia and New Zealand to save duty import fees. While Glen was in Fiji he found out there were these amazing rivers to run there. George Wendt went to Fiji in 1998 to check it out and he was really impressed. While Wendt was there he found a brochure with a cover shot of an indigenous Fijian on the cover of their brochure who had an OARS raft! "The boatman has a bottle of beer, and he was drinking it without any hands as he's rowing the boat! And this was their cover shot!" But what George wondered was how did they get an OARS raft?

(#h.) Mike Walker believes the fabric was coated and produced in France. In manufacturing his Canyon Inflatables Mike imported the fabric directly from France.(14) My research indicates: Domar used Kleber 6934 fabric manufactured by Kleber-Textil, a fabric finishing company in Brstadt, Germany.(#h.) Kleber 6934 is a tri-layered fabric of French origin.

(#i.) In Mike Walker's words: "It was Mike Fahey that was hurt in the factory explosion. Mike was the factory foreman and a craftsmen when it came to making boats. I was on the middle of Glen Canyon Dam on a field trip with my daughter's third grade class, and I don't know how somebody hunted me down, but a ranger came up to me and said you've got an emergency phone call. I went to the visitor center and called the Flagstaff warehouse and found out they had an explosion. Apparently Mike Fahey came up with the idea to get that viscous glue out he could pressurize the 55 gal. drum by sticking an electric blower into the top bunghole. You can imagine that this almost 90% empty tank with the glue in the bottom of it was just full of fumes. Of course there are sparks going around the blower's armature. They had apparently done it several times, but I guess they had done it and it worked. It got the glue out, they were just trying to get stuff done, and it was just real frustrating to sit and wait for a half hour to fill a one quart container, so they came up with this idea. Anyway that fateful day he stuck the air pump in to pressurize the tank and it blew up. You can kind of imagine standing there with it holding the electric, big red blower about thigh high, and it thing blew up right into his femur, and broke it in about twelve places. It just destroyed his femur. It started the corner of the shop on fire. I had somebody, maybe a park ranger, drive me to the Paige Airport (AZ) and I chartered a private plane and flew back to Flagstaff and went straight to the hospital. Mike was in surgery getting his femur repaired. Then I drove down to my shop and of course the fire was out. I walked in and was looking around and all these brand new boats were all dirty and sooty but none of them were damaged other than very, very dirty from the smoke and the soot. The fire was contained to just a little corner so the damage turned out to be quite minimal. But I was more concerned about this kid who was in the hospital. I didn't know if he was going to lose his leg or what, I was beside myself. I don't remember how long he was in the hospital, but I think he was in there for a couple of weeks. Over time he healed completely, he had a limp for a time but I think he barely has a limp anymore."(14)

(#j.) In Mike Walker's words: "It felt sudden; leaving Flagstaff, my home, my friends and the river industry in one fell swoop. It was an extremely difficult decision, but my ambitions were not being fulfilled and it felt like it was time to move on. I'm proud of whatever influence I had on the industry and the lives I may have touched along the way. I was with OARS for nearly twenty years, and in the river industry close to thirty... The time was full of challenges and great experiences... and I met amazing people along the way. I have no regrets, it was a great industry to be part of and a great lifestyle". (14)

(#k.) From Gary Harper: I don't remember Senor Dorati's first name. I spoke with his son Paolo a few years ago and he was living in Milan. He was working in the fashion industry and at that time he was thinking about starting Domar again, but I don't know if that ever happened. Iacopo Mazzei has his home in Florence but in the 80's he spent his weekdays in Rome. He ran an Agricultural Consulting Firm in Rome and worked on projects in Europe and Africa. His brother Francesco Mazzei today lives near Florence and he runs the family business of growing olives and grapes and making olive oil and wine. Their family website is at <http://www.mazzei.it/> and the website that they have for their family village is at <http://www.fonterutoli.com/> email from Walter Lonzar of Domar SRL. Via Nereo Martinelli (Trieste) - Italy to Herm Hoops; 10/17/2012: We are not, we are a company mainly inspect inflatable liferafts. I'm not sure but I think this factory do not exist anymore, I think somebody bought the brand and use it but I really do not know who can be, anyway if I will have some more infor I will write you again sorry I can not help you best regards. Walter Lonzar

(#m.) The first time Beth & Gary Harper went to Italy, they flew into Rome, met Iacopo and spent the night. The next morning Iacopo's brother Franchesco drove them to Genoa to the largest boat show in the world. There was a huge building with nothing but inflatable boats, there must have been 20 or 30 brands of manufacturers at least. Gary remembers the Domar plant in Santa Maria Hoe, Italy: "It was just an ordinary looking, stone, stucco a plain building with an iron gate and a small little courtyard about 10 yards square. Senior Dorati was very cordial and all of the people in the factory were very friendly. I was sitting in the waiting room there one day, lost in thought and all of a sudden I realized that in the tiles there were these little swastikas and they weren't noticeable unless you really looked closely. But they were in the tile work and I just assumed that they must have been there during the War (WWII), that it must have been a building that was built for the German Army." The plant was "pretty darn huge. I'll bet it was the size of this room (Three Rivers Convention Center in Grand Junction - 75,000 square feet in 2013) at least. There were probably four rooms of equal size." Beth remembers: "My first impression was WOW, we're in Europe, look at the cool gates that we drove through as we entered the property! The backdrop was the Italian Alps and it felt more like a resort than a raft manufacturing facility, of course until we went in." "It was a very familiar, family feeling between the employees. Although it was Italian, so there was high pitched this and that and the hand movement as they talked. You could tell that they really loved their work. They had about a dozen people working. They had two hour lunch breaks, because in Europe people, it's different, they work to make money but they are alive, they work to live. It was amazing, in the U.S. we promote the use of respirators for folks when they're repairing rafts, ventilation and gloves. Over there they had the toluene in five gallon open buckets and I remember seeing this gal dipping a rag down in the bucket and just swabbing the chambers of a raft and I was just horrified. I thought: Honey do you know what you're doing? They didn't have OSHA (Occupational Safety and Health Act)." "I'm not sure if Gary has told you this, but we sat and watched Maria building cross thwarts, that's all she did was make cross thwarts. That was one of the building pieces that Gary utilized when we started our dry bag business years ago. Watching Maria helped solidify how to work with those small spheres. Our dry bags had the industrial grade lock closures. Long frustrated with traditional waterproof bags, Gary designed and made the bags from 1987-1994 out of Hypalon material with an industrial zip lock closure and marketed them under the name Man of Rubber. That part of their business was sold to Eric Revels, a Man of Rubber employee in 1994 and is now under the brand name Watershed.(16)

(#n.) SOTAR for State Of The Art Raft. SOTAR, under the name Whitewater Manufacturing in Merlin, Oregon was founded in 1980.

(#o.) Corsair was the name of Dorati's Italian & European Lines of inflatables.

(#p.) Around 1984 Mike Walker visited another plant that was building inflatables for Dorati outside Florence, Italy. Mike is unsure if they moved the plant or if it was a satellite or temporary plant.

(#q.) Bridgeport was founded at the beginning of the Second World War as “Industrie Meccaniche Donatini S.p.a.” At the end of the war they began the manufacture of tire valves. In 1960 it became the Italian branch of Bridgeport U.S.A. Bridgeport valves are an all metal (stainless steel or aluminum) construction, less prone to rubber degradation and leaks. Two tabs inside the valves (see photo page) are used to open the valve for inflation/deflation. They are small, and were difficult to position. They came with a press fit cover plug that was hard to press on and was often cut off. (20) The Bridgeport valves were generally good valves but when deflating and rolling up the boat the fabric would cover up the valve and prevent air from escaping.(21)

(#r.) George Wendt provided the initial funding for Domar USA and later he and Mike Walker were partners funding it. Walker funded Canyon Inflatables on his own. (13,21)

(#s.) Approximately 2,000 square feet.(21)

(#t.) Sobek, and in Greek, Suchos (Σοχος) was an ancient Egyptian deity with a complex and fluid nature associated with the Nile crocodile and is either represented in its form or as a human with a crocodile head. Sobek was also associated with pharaonic power, fertility, and military prowess, but served additionally as a protective deity with apotropaic qualities, invoked particularly for protection against the dangers presented by the Nile river. The Sobek Adventure Team used Sobek and SOBEK interchangeably. George Wendt took a trip to the Sobek Temple on the Nile River that had statues of the Sobek deity represented in its form as a human with a crocodile head

(#u.) Domar made several versions of the Indus Model with slight variations - as the Indus II a 17'5" about six of these revised boats with 4 thwarts were sold to an outfitter in Upstate New York (23, 24)

(#v.) Iacopo spoke near perfect English and Francesco spoke good English. The Mazzei family has a website featuring their wines and history. They also have vacation houses and cottages for rent to tourists in their family village where their vineyard, winery, olive orchard and olive oil production facilities are located in the village of Fonterutoli. Francesco runs some of the operations and you can see a photo of him when you click on Family. The photos rotate and when the photo of two gentlemen come up he is the one on the right. The gentleman on the left is another brother whose name may be Filippo. When Beth and Gary Harper went to Italy in 1985 Francesco gave them a tour of the village, winery, etc. Gary asked if we could buy a case of wine to take home and he said “No, no... please let me give you some wine”... which he did. You can buy their wine at wine.com for around \$30: <http://www.fonterutoli.com/> to view their website go to: [http://www.wine.com/v6/Fonterutoli/learnabout.aspx?winery=1025&s=psca\\_google&cid=psca\\_google\\_fonterutoli%20wine&kid=fonterutoli%20wine&gclid=CJvp-ZDZzbkCFUlp7Aod6FYAzw](http://www.wine.com/v6/Fonterutoli/learnabout.aspx?winery=1025&s=psca_google&cid=psca_google_fonterutoli%20wine&kid=fonterutoli%20wine&gclid=CJvp-ZDZzbkCFUlp7Aod6FYAzw)

(#w) Canyon PRO: PRO stands for Professional River Outfitters

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