

# Leyland Raft History

By Herm Hoops ~ 2014

Leyland Rafts, manufactured in Leyland, Lancashire, England, made their appearance on American Rivers in the early 1970s. Originally founded in 1862 as the Leyland and Birmingham Rubber Company(L&B), they were greatly influenced by Thomas Hancock who was a rival of Charles Goodyear.(#b) The Leyland and Birmingham Rubber Company had a philosophy of catering to small business and encouraged their managers to operate as independent units that were able to access the company's central core.(17) L&B had fully equipped testing laboratories, product development engineers and met the NATO Standards.(17)(#h.) After 140 years of rubber product manufacturing Leyland and Birmingham closed in 2002.(16)(#a)

Leyland's white water rafts have been widely used by the world's river runners from the Amazon to the Zambezi and Grand Canyon. Their rafts could be adapted to suit particular operating requirements - to accommodate disabled rafters or to cope with unusual river conditions. Their boats could be fitted with internal transoms for outboard motors. Eurocraft developed special designs for such inflatables as the Idaho Sweep Rig, Grand Canyon "J" Rig, Volvo Raft and the "Roof of he America's" Catamaran Discovery Rig.(1,16)

Salesmen Dave Rees and Chris Burrows were in charge of Leyland's design and marketing. Chris Burrows, trained as a rubber technologist by the British Tyre & Rubber Company from 1963-1967. In 1972 he joined L&B as an export manager.(16) By 1973 Burrows identified the whitewater rafting industry in the United States as a potential market. Dave Rees was the L&B Fabrications Division Business Manager. They developed self-bailing floors using "Lister Slab" that was coated by L&B.(16.) In 1989 Chris Burrows and Dave Rees purchased the whitewater raft templates they had designed and some fabric from Leyland and Birmingham (L&B) and started Eurocraft GB on April 1, 1990.(16) They employed 20-25 people for 20 years.(18)

Eurocraft GB was a specialist inflatable rubber company, founded on technological expertise in the marine, military, rescue, recovery and leisure markets and a plethora of industrial applications. Eurocraft GB products have been used in diverse applications such as pipe testers, lift bags and a new flood rescue raft. They manufacture RIB tubes for all makes and models of boats, rescue equipment for emergency services worldwide, wave skimmers and white water rafts for the global river rafting industry.(#k.) Nufox Rubber, makes a variety of vulcanized rubber products for industry.(7,16)(#l.)

In 1974 the first L&B whitewater raft models were sent to Jon Dragan of Whitewater Unlimited in Thurmond, West Virginia.(#d.) Dragan had a great influence on the raft designs. In 1975 Chris Burrows and Keith Carter flew from England to Salt Lake City, Utah where they rented an RV and went on a 5,000 mile odyssey visiting Western river outfitters.(#m.) They exhibited their boats at the Western River Guides Association convention in Jackson, Wyoming(#e.) During that trip Mike Walton, Dave MacKay and Dee Holiday signed a distributor agreement with Rafts West.(#f.) Holiday sold about 200 boats and his company ran about 20 of them.(2,12,13,16)

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

Leyland inflatables were expensive, and their sales were greatly affected by the British Pound exchange rate.(2,16) In the wildly fluctuating exchange rate, especially in the 1980s raft production virtually ceased. Leyland stopped making recreational river boats for the U.S. market as they were not a profitable product.(12,13)

When Chris Burrows and Dave Rees began Eurocraft (GB) Ltd. In 1990 they began business in a neighbor's unfinished house extension. They soon moved to the drafty and damp Dunkirk Hall in Leyland, Great Britain. Their initial products were whitewater rafts, vehicle lifting bags, and inflatable canoes and kayaks. Their fabrics were procured from Aerazure in France.(#i.) By 1992 Eurocraft had been recognized by winning "Flying Start," a business competition on commercial television with a prize of L40,000 (around \$60,000). They used the prize money to pay a deposit on their own 6,500 sq. ft. factory and by 1999 they added the adjacent 10,000 sq. ft. unit.(16)

Chris Chadwick, former member of the L&B technical department, joined Eurocraft in 2004 as a production manager. Chadwick, pending securing finance, planned to take over the company. By 2006 Chadwick located a backer and he purchased Eurocraft. By 2008 "skulduggery puts Chris Chadwick" out of the company.(16) By 2009 Eurocraft (GB) Ltd. "goes bust with huge debts" but rises again like a phoenix as Eurocraft, Ltd. Burrows and Rees asked Chadwick to bring his Specialised Inflatable Technology Ltd. (S.I.T.) business to their factory.(16)(#g.) In 2012 S.I.T. began using computer driven buffing and cutting CAD systems, and in 2013 Chris Chadwick purchased the factory.(16)

In 2011 Eurocraft discontinued making the Leyland line, although in 2012 they continued to advertise a leisure line of inflatable tenders and rafts. Dan Baxter felt that Eurocraft, as with many manufacturers, had difficulties competing with the ever increasing line up of river raft manufacturers. Dan thinks that Chris Burrows was really good about helping their salesmen who were handling the rubber fabrication business with the materials and marketing.(2,6,12)

Leyland rafts were designed for a shallow draft under heavy loads. They included additional reinforcement at stress points, stainless steel D-rings and Leaffield Valves type valves. They were manufactured using a cold-cure process.(12) They provided several floor options, including non-self-bailing models. The self-bailing floors, made of drop stitch, that provided a smooth underwater profile. The Leyland inflatable, self-bailing floor (mainly on 14' and longer rafts) used a 150mm drop thread fabric and was often copied by other manufacturers. Leyland rafts were made from top fabrics with Hypalon/Neoprene coatings on 1100D/Tex Polyester Textile (normal use) and 1650 D/Tex (heavy duty) specifications carrying RINA, Bureau Veritas and MCA approvals backed by a 5 year warranty. They had limited color schemes on standard production models, but would custom produce a variety of colors. All rafts were supplied with a Dual Action Hand Pump & Repair Kit.

<u>Model</u>	<u>Length</u>	<u>Beam</u>	<u>Tube Dia.</u>		<u>Type Material</u>	<u>Floor</u>	<u>Chambers</u>
Leyland 12	12'	5'6"/6'	14"/18"	32 oz. Neoprene	36 oz.	2	
Leyland 14 & 15	14'/15'	6'6"	18"	36 oz. Neoprene	36 oz.	4	
Leyland 16 & 17	16'/17'	8'	21"	36 oz. Neoprene	36 oz.	4	
Leyland 19 & 20	19'/20'	8'	24"	54 oz. Neoprene	54 oz.	6	
Leyland 22 & 24	22'/24'	8'4"/9'	34"/36"	54 oz. Neoprene	- - -	8	
Leyland 27 & 33	27'/33'	8'6"/9'	34"/36"	54 oz. Neoprene	- - -	8/10	
Side Tubes	22'-33'	- - -	34"/36"	54 oz. Neoprene	- - -	3-5	

Bill George, of Western Rivers Expeditions, bought the 35' foot J-Rigs for use in the Grand Canyon. Dave Mackay of Colorado Rivers and Trails Expeditions began using Leyland Rafts in 1976 and in 1982 for their Cataract Canyon high water and their Grand Canyon river trips. In the mid 1980s they switched to DIB inflatables(#c) but they still use two Leyland 35' pontoons in Cataract Canyon during high water and like them. Walker Mackay says, "The last time I took one down was in the high water of 2011 at 77,500 cfs. They are lighter and quicker than the DIBs."

Adventure Bound had two 19' British Leyland rafts in their fleet. The first raft was purchased sometime in the late 70's and the second was purchased about 1982 or 1983. Keith Counts bought them from Mike Walton in Salt Lake City, and Keith claimed the first one was the first self-bailer in Colorado. The rafts had a floor with ribs on the bottom, similar to the Riken Aztec, that made for some unfortunate drag.(3, 15) Dee Holiday used the 17' non-self-bailers as triple rigs in Cataract Canyon during high water levels. Dee said that "The Leylands were not much for performance, but they were built very well."(2) Lance Martin of Wilderness Voyageurs in Ohiopyle, Pennsylvania had a fleet of over sixty Leyland paddle boats in 1987 and as did Jon Dragan's Wildwater Unlimited in Thurmond on the New River.(4,16,20) Colorado Outward Bound owned a couple of Leyland non self-bailers and Al Brown liked how they rowed.(5) Hughes River Expeditions in Idaho used the inflatable Leylands for their Sweep Rigs. Leyland and Eurocraft sold their whitewater boats around the World.(18)(#j.)

Leyland and Eurocraft no longer manufacture whitewater boats, but the company now run by Chris Chadwick is Specialised Inflatable Technology Ltd. and is ably assisted by Burrow's son Kit. Specialised Inflatable Technology Ltd. manufactures a wide range of inflatable products... including whitewater rafts.(18)

## **REFERENCES:**

- (1) Personal communication from Dave Cowell, Leyland (email sales@eurocraft.com) to Herm Hoops, 2008;
- (2) Interview with Dee Holiday, CROA/UGO Conference, Grand Junction Colorado; Herm Hoops, February 8, 2012;
- (3) Phone interview with Tom Kleinschnitz, Herm Hoops 11/01/2006;
- (4) Interview with Eric Martin, Wilderness Voyageurs; CROA/UGO Conference, Grand Junction Colorado, February 8, 2012;
- (5) Al Brown email to Herm Hoops 10/13/2012;
- (6) Telephone Interview with Dan Baxter, Herm Hoops, 10/27/2012;
- (7) Eurocraft Inflatables Limited website; www.eurocraft.com/ - United Kingdom
- (8) Correspondence: Dee Holiday to Herm Hoops 02/21/2013;
- (9) 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; 09/27/2013;
- (10) Leyland Historical Society; <http://www.leylandhistoricalsociety.co.uk/>;
- (11) Leyland and Birmingham Rubber Co. LTD. Sales Catalog;
- (12) Interview with Dave Demaree, Demaree Inflatable Boats, at CROA/UGO Conference, Grand Junction Colorado; Herm Hoops, 02/6/2013;
- (13) Phone interview with Mike Walton, Walton Marine; Herm Hoops, 05/29/2013;
- (14) *Charles Goodyear Story*, "The Readers Digest", 1958;
- (15) email Tom Kleinschnitz to Herm Hoops, 12/30/2013;
- (16) Corrections to draft and Information by Chris Borrows; Herm Hoops, 01/18/2014;
- (17) *The Leyland & Birmingham Rubber Co. LTD. Over 125 Years*; from Chris Burrows Collection;
- (18) email Chris Burrows to Herm Hoops, 1/24/2014;
- (19) email corrections Chris Burrows to Herm Hoops, 04/09/2014;
- (20) email Eric Martin to Herm Hoops, 4/17/2014;

## **MISCELLANEOUS**

- U.S.C.G Hull Serial Code: ZLB, LBG (9)

- CONTACT INFORMATION: (See (#g. below)

Historic location: Unit 1, Osprey Place, Titan Way, Moss Side Industrial Estate  
Leyland, Lancashire, PR26 7EW

*History of Leyland and District*; Hunt, David; 990, Carnegie Press  
**The Leyland & Birmingham Rubber Co. Ltd.: Over 125 years**

## **SIGNIFICANT NOTES:**

### **(#a.) Leyland & Birmingham Rubber Company (Edited From Leyland Historical Society)**

James Quin brought the new rubber industry to Leyland in 1862, and he purchased a small factory. The pioneer, Thomas Hancock of London, had developed vulcanization in 1844 and was beginning to discover the benefits of additives such as carbon black and fillers. James Quin learned these techniques from his successor, James Lyne Hancock, with the result that Hancock's employees were sent to Leyland to pass on their skills to the Leyland workforce.

In 1868 the expanding business moved to their new site on Golden Hill Lane, Birmingham, England. Following the increase in business, the firm became a public company in 1873 as Mr Quin's Indian Rubber & Hosepipe Works. James Quin & Co Ltd., were described as "manufacturers of all kinds of India rubber articles, valves, sheets, buffers, washers, rings, cylinders, steam packing, hose tubing, India rubber machinery, belting, woven linen hose pipes for agricultural, fire brigade and mill purposes, and all India rubber articles used for engineering purposes, elastic steam rope, round or square, with core in the centre, and all kinds of water proof covers made to order, also water proof horse cloths etc."

Following the death of Mr Quin in 1883, the works then became the Leyland Rubber Company in 1886. The amalgamation with the Birmingham Rubber Company in 1898, led to the company now known as The Leyland & Birmingham Rubber Company.

Following a fire on January 18th 1913, the rebuilding of the three-storey frontage to Golden Hill Lane enabled the company to expand. During the World War II, the factory produced inflatable craft, barrage balloons, dummy tanks and gas masks. In 1962, the company returned to become part of the Leyland & Birmingham Rubber Co., which it remained until its closure. In 1962, J.E. Baxter & Co. Came back into the fold and a friendly merger in 1969 they joined with their close rival, British Tyre & Rubber Co. (BTR), the L & B continuing to operate as a separate company within the B.T.R. group until it closed in the summer of 2002 and was demolished in the following September.(10) During the BTR manufacturing era they employed up to 1,000 people.(17,19)

### **(#b.) Thomas Hancock & Charles Goodyear**

One of the leading firms in 1862 was Thomas Hancock's, which had passed into the hands of James Lyne Hancock. There was a connection of some kind between James Quin and the Hancock firm, allowing James to acquire the cutting-edge techniques which were in practice there, and then making possible some kind of staff transfer from the Hancock factory in London to the new venture in Leyland. (10)

Charles Goodyear was slow in filing foreign patent applications. But he had sent samples of his heat-and-sulphur-treated gum to British rubber companies without revealing details. One sample was seen by English rubber pioneer Thomas Hancock, who had been trying for 20 years to make weatherproof rubber. Hancock noticed a yellowish sulphur "bloom" on the Goodyear sample's surface. With that clue, he reinvented vulcanized rubber in 1843, four years after Goodyear. By the time Goodyear applied for an English patent he found that Hancock had filed a few weeks earlier. Offered a half-share of the Hancock patent to drop his suit, Goodyear foolishly declined -- and lost. A friend of Hancock named the contested process "vulcanization," after Vulcan, the Roman god of fire.(14)

### **(#c.) DIB - Demaree Inflatable Boats, Friendsville, MD.**

**(#d.) Wildwater Unlimited** (From Wildwater Unlimited Web Site)

In 1968, three brothers pushed off the banks of the New River in Thurmond, West Virginia, launching not only a raft with Wildwater Unlimited's first paying guests, but also a whitewater rafting industry that now sees hundreds of thousands of rafters visit the Mountain State each year. To get to that point, the Dragan Brothers, Jon, Tom and Chris, laid the groundwork by taking numerous trips of their own, scouting each rapid to determine the best route and identifying river access points. Starting with a small loan, a pickup truck, and an army-surplus raft, Wildwater Expeditions Unlimited was born.

Jon, Tom, and Chris Dragan built Wildwater on a foundation of excellent customer service, dedication to safety, and a profound love of West Virginia whitewater. As the first whitewater rafting outfitter licensed in West Virginia, Wildwater has seen many new developments and fads throughout the whitewater industry, but one simple fact remains: the Dragans pioneered whitewater rafting in the eastern United States, setting standards of excellence for others to follow and they strive to maintain the same levels of professionalism, safety consciousness, and love for the river that helped popularize the sport of rafting 45 years ago.

**(#e.) Western River Guides** (Edited from UTAH.com, by Richard Quist)

In the winter of 1954, a small group of part time, some time and "wanna be full time" Utah outfitters gathered in Salt Lake City and formed the Western River Guides Association. The name "Western" was probably decided on over "Utah River Guides Association" because several of the founders had ties to and experience in running some of the rivers in Idaho and Wyoming, but it is doubtful if many there that day had a vision of what recreational river running was destined to become. Over time as the industry grew the organization the WRG filed their last tax return and members joined America Outdoors. As state, federal and other management issues cropped up the Utah Guides and Outfitters was formed around 1980.

**(#f.) Mike Walton, Dave Mackay, Dee Holiday & Rafts West**

Mike Walton owned Walton Marine in Salt Lake City; Dave MacKay owned Colorado Rivers and Trails and Dee Holiday owned Holiday River Expeditions: both headquartered in Salt Lake City. Rafts West was located at 512 Leland Avenue, Salt Lake City, UT 84106

**(#g.) Specialised Inflatable Technology (from S.I.T. website)**

SIT Ltd design and manufacture low pressure inflatables including rescue equipment, air jack cushions, Rib sponsons and whitewater rafts and kayaks

SIT Ltd, 112 Clydesdale Place, Moss Side Ind Est, Leyland, PR26 7QS.

Tel: 01772 459143; [www.sitltd.co.uk](http://www.sitltd.co.uk)

Chris Chadwick: Tel: 07743 955 983; [cchadwick@sitltd.co.uk](mailto:cchadwick@sitltd.co.uk)

Kit Burrows: Tel: 07976 054 569; [kburrows@sitltd.co.uk](mailto:kburrows@sitltd.co.uk)

**(#h.) NATO Standards**

NATO - North Atlantic Treaty Organization; Standard AQAP-4, equivalent to BS.5750 part II;

**(#i.) Aerazure and Pennel**

Manufacturers of technical, rubber, polyurethane and PVC coated fabrics for inflatable products applications, from woven and non-woven base materials with offices in France, Belgium and other places around the world. In 1921 Jean Pennel & Joseph Flipo create a process for coating rubber onto textile. In 1924 Pennel & Flipo was created from that technical innovation. Their processes are ISO 9001 certified. The outer layer of their ORCA® engineered fabrics provides exceptional resistance to Ultra Violet, weather resistance and extreme temperatures.

**(#j.) Worldwide customers**

Some of the Worldwide customers of leyland and Eurocraft are:

Feelfree, Rafting Centre Taxenbach, Helmut Friedler, Fuzzi Huber (landeck), Michael Gaszcik, Rudi Guisler, Andreas Vogelstetter, Tirol Rafting, (Austria); Faszinatour, U.S. Military (afees), (Germany); Swiss Adventures, Alpine Rafting, Reto Freimuller, Urs Bigger, Stefan Zumsteg, (Switzerland);

**(#k.) RIB**

A rigid-hulled inflatable boat, (RHIB) or rigid-inflatable boat (RIB) is a light-weight but high-performance and high-capacity boat constructed with a solid, shaped hull and flexible tubes at the gunwale. The design is stable and seaworthy. The inflatable collar allows the vessel to maintain buoyancy if a large quantity of water is shipped aboard due to bad sea conditions. The RIB is a development of the inflatable boat.

**(#l.) Nufox**

Nufox was not a subsidiary of Eurocraft but the group that eventually took the Eurocraft Ltd. name.(19)

**(#m.) Burrows & Carter U.S.A. Travel Odyssey**

After their 5,000 mile western U.S. trip Chris and Keith flew to Beckley, WV and met Jon Dragon in Thurmond, WV to run the New River in an early November snowstorm. They offered free space on the trip to the National Park Service staff. Keith and Chris were wearing RAF survival suits and the raft guides were wearing two wet suits each! The three Park Service employees showed up wearing anoraks! Half way down the rivetr, around Keeney Rapid, they had to stop and light a fire with a signal flare in order to thaw the Park employees out!

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- Chris Burrows, Leyland and Eurocraft
- Sue & Dee Holliday, Holiday River Expeditions

**FOR INFORMATION REGARDING THIS DOCUMENT CONTACT:**

**The University of Utah; J. Willard Marriott Library; Special Collections Department; 295 South - 1500 East; Salt Lake City, Utah 84112-0860 ([www.lib.utah.edu](http://www.lib.utah.edu))**

{ 1<sup>st</sup> draft 02/15/12 - 448; 2<sup>nd</sup> draft 10/10/12 - 1101; 3<sup>rd</sup> draft 10/22/12 - 995; 4<sup>th</sup> 05/23/13 - 1135; 5<sup>th</sup> 08/22/13 - 1077 words, 6<sup>th</sup> draft 1591 words; 7<sup>th</sup> draft 3000 words }