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Billboard

Letters

To the editor:

David Lyon ("Art, Architecture and the Automobile," SAH Journal #303) takes an interesting tack in forming defined eras for the development of the automobile. I look forward to the definition of further eras and examples of their constituents.

I think he makes too much of any similarity between Britain's "Red Flag Laws" and Henry Ford's maiden voyage in the Quadricycle. George S. May, in A Most Unique Machine: The Michigan Origins of the American Automobile Industry (William B. Eerdmans Publishing, 1975), covers this in some detail. Indeed, Jim Bishop, Ford's chief assistant, set out ahead of his boss on a bicycle. May does not attribute a purpose to Bishop's action, but I'm skeptical that it was to warn pedestrians. By June 1896, Detroiters were already familiar with the automobile; Charles Brady King had driven one on the city's streets three months earlier, and had been forced to stop when curious

crowds impeded his progress. Ford knew this full well. He had *followed* King on that nighttime escapade—on a bicycle (ref. May pp. 92-93, emphasis mine). I think that Bishop's assignment was simply to clear the way. As it happened, it didn't matter. By May's account the Quadricycle stopped dead after a couple of blocks, requiring the boss and his assistant to run to the Edison plant for a part of some sort. Was this, I wonder, Detroit's first roadside automobile repair?

May goes on to examine the competing and contrasting claims of King and Ford. It makes for very interesting reading.

—Kit Foster

REPRISED ANNOUNCEMENTS:

Cancellation of the SAH Annual Meeting of Members & Gala Awards Banquet: The event has been cancelled due to the COVID-19 epidemic. Please go to the SAH website (autohistory.org) to monitor future developments.

Announcing the SAH Forum: Please take a moment to visit the forum, go to https://forums.aaca.org/ and scroll down to the forum named <u>The Society of Automotive</u> Historians.

Front cover: Inspired by Louis Fourie's article we present this 1927 Mercedes-Benz Model K (chassis 60437) with roadster coachwork by Fleetwood (body 35828) owned by Michael and Joannie Rich, shown at the 2019 Radnor Hunt Concours d'Elegance where it won best of show. The photo's background is a close-up of the fabulously machined hood. The first owner, William Sloan, saw this Fleetwood coachwork on an Isotta Fraschini owned by Rudolph Valentino and ordered the same design. [One could see the Valentino car in *Isotta-Fraschini: the noble pride of Italy (Ballantine's illustrated history of the car, marque book no. 3)* on pp. 112-113, ISBN: 978-0345022899. Note on the book's title: Isotta Fraschini never had a hyphen.] Photos by the editor.

Back cover: As mentioned in Mr. Fourie's article, Mercedes-Benz was created in 1926 with the merger of Daimler and Benz. This 1926 poster promoted Mercedes-Benz showing the marque logos of Mercedes with its three-pointed star and the Benz with its laurel wreath, later combined as we see it today.

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President's Perspective



A Few Observations...

ne hundred and twenty years ago, as the fin de siècle era of the nineteenth century was approaching its end, the twentieth century then just a few months away, the automobile was still somewhat of a curiosity and a novelty, being seen more often than not as just another plaything for the wealthy, something far beyond the means of mere hoi polloi. By the end of the twentieth century, the automobile helped transform that century in ways that might have been difficult for those at the beginning of that century to imagine. Industry on an international scale was affected by the automobile, the global landscape was literally transformed by the road networks built for the automobile, the world's economy was affected by the financial structure related to the automobile, the environment was seriously impacted by the presence of the automobile, to mention just a few areas that the automobile seems to have left its mark upon the world that we today inherited from the twentieth century.

Yet, there seems to be something of a serious case of "autophobia" within the hallowed groves of academe. Courses being offered at the college and university level regarding the automobile and its history and culture are, to be polite, very few and very far between. The engineering and financial/business studies areas probably devote more attention to the automobile than those in the humanities do. That is, of course, faint praise given that the automobile is viewed as simply another commodity or object to be studied and considered. Microwaves or the number of breadsticks served at an Italian restaurant probably get just as much (or more) attention.

I have never understood this lack of interest—this "autophobia"—within academe. There are, naturally, those within the academic community who do take the automobile, its history, and its culture quite seriously. Indeed, my interest in the automobile as a cultural and historical artifact can be directly traced to a graduate class in the geography department

at the University of South Carolina with the intriguing title, "Urban Spatial Systems." In this class, for the first time, I began to truly grasp the significance of the automobile and its impact, certainly upon the urban spatial systems of the nation, but also in a much wider context. (As an aside, I was also able to use my skills as a computer programmer and war-gamer in those ancient days to update one of the teaching tools used in the class, a version of CLUG, the "Community Land Use Game," which would later lead to another interest: roadside architecture.)

Thanks to this widespread "autophobia" within the academic community, much of the study of the automobile and its history and culture has tended to be done by either those within those hallowed groves of academe doing so on their own or those working outside those hallowed groves. This is not to suggest that there are not those within academe whose interests ignore or disregard the automobile, simply that by and large at the institutional level there seems to exist some form of "autophobia." In essence, this has led to much of the work and interest in the history and the cultural aspects of the automobile being essentially "contracted out" to those dwelling outside those hallowed groves, if you will.

The Society of Automotive Historians is not a "car club." The SAH definitely encourages and supports the many clubs that do focus their attention on a single marque or model or other aspect of the automobile. These many organizations represent an essential element regarding the automobile and its impact on the modern world: that the automobile is an important part of our global culture.

The enthusiasm and interest that these many organizations generate in the automobile and its past helped lead to the creation of the SAH. I think that it is safe to suggest that most members of the SAH belong to at least one car club—if not more than one in many instances. Whether it is the Ford Model A, the Oldsmobile 4-4-2, Pontiacs, Corvettes, MG-TD's, Impalas, Studebakers, Lowriders, the Austin Bantam Society, the Antique Automobile Club of America, United Street Rods of Idaho, the Trabant, and so on and on, they exist for a reason: the automobile. They also reflect the cultural impact of the automobile across not just the United States, but the entire world.

Likewise, more than a few members of the SAH also belong to professional or academic organizations such as the American Historical Association (the AHA, of which the SAH is an affiliate member), the Society of Automotive Engineers (SAE), the Organization of American Historians (OAH), the Popular Culture Association (PCA), the Society for the History of Technology (SHOT), the North American Society for Sport History (NASSH), and so on. The SAH also works with and supports the efforts of other organizations such as the Historic Vehicle Association (HVA), the National Association of Automotive Museums (NAAM), The Society of Automotive Historians in Great Britain (SAHB), the Automotive Historians Australia (AHA), Patrimoine et Histoire de l'Automobile en France (PHAF), the Automobilhistorische Gesellschaft (AHG), the Associazione Italiana per la Storia Dell Automobile (AISA), and so forth.

It is this big tent approach that makes The Society of Automotive Historians the sort of organization that considers the history and culture of the automobile from its many possible perspectives. Get involved. Most importantly, get to work on putting the history and culture of the automobile firmly within the framework of modern history.

—H. Donald Capps



Editor's Note: The subtitle of this article translates as "past dreams of tomorrow" as it examines the late prewar and early postwar era of Mercedes-Benz, with a focus on its engines. The author, past SAH president Louis Fourie, describes how the motivation for his research came about: "After reading about the pre-WWII prototype V12 Mercedes-Benz engine in the remarkably detailed V12 book written by Karl Ludvigsen I recalled some relevant photos in the German magazine Motor Klassik. A further check of articles written by Günter Engelen in its January and February 1986 as well as November 1987 issues, provided more insight, even though my understanding of the language is extremely limited. Recent research via Mercedes-Benz Classic contributed details for these cars as well, with all these sources cumulatively providing the material for the article that follows." What follows comes in two parts, predictably addressing the late prewar era in this issue, and the early postwar era in the next. So why is German used in the

What Might Have Been

title? Yes, it's apropos to the subject, but it's actually recognition of the

role of Motor Klassik magazine in the author's research—a reminder

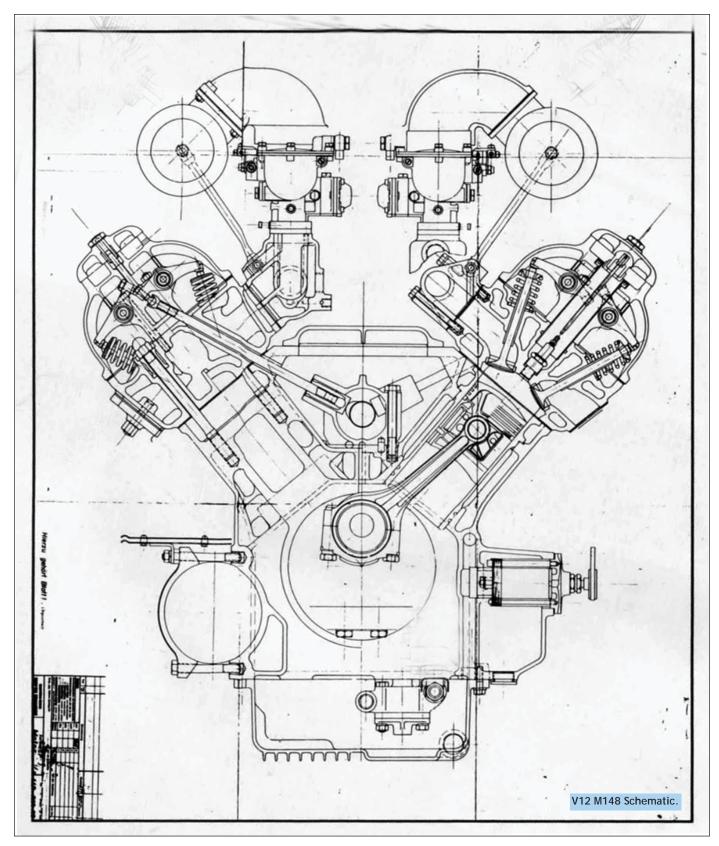
that there's a whole world out there beyond what is recorded in English.

It is interesting to speculate what the product line Mercedes-Benz would likely have offered in the early 1940s had not Hitler plunged the world into conflict. Here we look at a family of engines and the bodies that were in planning and prototype stages in 1938 and 1939.

The Treaty of Versailles triggered various adverse effects on Germany and its automobile manufacturers in the period after World War I. These bleak times forced Daimler and Benz to merge in 1926 creating Mercedes-Benz; but before any plans to harmonize their respective product offerings could be formulated the Wall Street crash of 1929 disrupted everything.

The necessary move down market created the 170 series of 1931 that would be updated in 1936 with the engine either at the front or back. The arrival of Hitler and the fervor it created permeated 1930s German society and its economy. At Mercedes-Benz there was an impatient updating of existing designs, and part of that effort led to establishing new heights of prestige with the sporting 500 K and 540 K supercharged models. In addition the German leadership was tired of seeing Alfa Romeo and Bugatti in the winning circle of European racing. At Mercedes-Benz engineering resources were happily siphoned off into racing ventures, with the added pressure of keeping the Auto Union in the rear view mirror.

It was into this climate that Hans Gustav Röhr arrived as technical chair of passenger cars for Daimler-Benz on September 17, 1935. (Daimler-Benz AG was the original corporate parent name for Mercedes-Benz with the merger of Benz & Cie. and Daimler-Motoren-Gesellschaft on June 28, 1926. —Ed.) By way of background, following the death of Hans Nibel in November 1934, Max Sailor succeeded Nibel but as supervisory board chair. The chairman of the board, Emil Georg von Straus, also a Deutsche Bank executive, wanted some new blood in this technical role. Persuading the merits of Röhr was not easy for von Straus. Röhr was only 40 years old, he lacked top drawer academic credentials and he demanded that he bring in several of his team from his prior employer, Adler. As an outsider, this last demand was smart and ensured that his innovations would have support from his old team.



Between 1936 and 1937 Röhr built a range of front-wheel drive prototypes with boxer engine layouts all with a square 74 x 74mm bore and stroke. They were a 1272cc four-cylinder (M144), a 1914cc six-cylinder (M145) and a 2544cc eight-cylinder (M146). All these horizontal boxer engines had side-valves and 5-speed transmissions. The four- and six-cylinder chassis had double wishbone front suspension with torsion bars, while the eight had twin transverse leaf springs and the usual swing axle in the rear of the larger of the two

prototypes. The smallest had a leaf spring live rear axle. Eighteen units of the four-cylinder W144, four units of the six-cylinder 190 VB W145 and 16 eight-cylinder 260 VB W146 prototypes were produced; but these early attempts to duplicate Adler type front wheel drive cars went nowhere at Röhr's new employer.

Röhr redeemed himself in the eyes of his boss Wilhelm Kissel with plans to harmonize a modular series of engines that would span through four- and six-cylinder in-line engines as well as a V8 and



V12, all with a common and interchangeable head design. Wilhelm Syring, one of his Adler recruits, was responsible for these engine designs. Unfortunately Kissel's leadership would not last two years; a virus causing his death on August 10, 1937.

Even though Mercedes-Benz was familiar with overhead cams for its racing engines, Röhr and Syring focused on the combustion chamber rather than the valve gear. Röhr was a firm believer that overhead valves only had a significant advantage over side valves when there was a hemispherical head with angled valves, cross flow porting and a centrally mounted spark plug. Although it was possible to have a central single overhead camshaft operate rocker arms to angled valves on both sides of the head, there would be no access for a central spark plug, which was one of the core requirements. That would have meant the need for twin overhead camshafts whose cost was not acceptable for smaller applications in this engine range.

Faced with these restrictions, an overhead valve configuration was formulated for all engines in the range. Rather than have the pushrods run parallel to the cylinders, they were angled about 35 degrees from their normal parallel plane. This was necessary to ensure that the tops of the pushrods lined up along the center of the head, equidistant from the two outside valve stems. To accommodate this pushrod angle the camshaft needed to be carefully positioned. In the V engines this involved a high mounting between the banks of the cylinders, but in the in-line engines, the camshaft had its own protrusion or bulge running along the side of the engine block. The valve rockers were angled and splayed round the spark plug tube, because the top of the pushrods were on either side of this spark plug tube, but the opposing valve stems were in line with the central spark plug.

As it will be explained later in this article, the first applications of this new family of engines was targeted at the larger V8 and V12. Any early application for the proposed 1729cc OHV small four-cylinder identified as M158 was put on hold because of the relatively recent update of the 170V, but also because of the arrival in 1935 of the Opel Olympia which introduced unit body construction into the small car marker, a feature that would be

prudent for Mercedes-Benz to adopt in any major body redesign. At the time, the company simply did not have the engineering resources for such innovative body construction technology. Opel would also introduce an overhead-valve four-cylinder engine at the end of 1937, while Mercedes-Benz would retain its side-valve four-cylinder engine until 1957.

For a conservative manufacturer such as Mercedes-Benz, the styling of the Opel Olympia seemed too aggressive. There were some similarities to the Airflow models that emerged from Chrysler and DeSoto in 1934 and these models had flopped badly, being too avant-garde for the American public. Likewise the rear-engined 170H, which had similarities to the Airflow designs, had been a failure. However, the Germans were proud of their autobahns and welcomed this new slippery trend pioneered by the likes of Edmund Rumpler and Paul Jaray. Fortunately the 170V had a classic flowing fender style that transcended fashion.

The prototype 2594cc six-cylinder OHV M159 shared identical cylinder dimensions with its four-cylinder relative. What was strange is that the four-cylinder engine had five main bearings whereas the six had only four main bearings. The W153 introduced at the 1939 Berlin Motor Show as a six-cylinder side-valve 230 with 2289cc would have been the ideal body for the new 2.6-litre OHV engine. The styling of the 230 and prototype 260 looked identical until one noticed that the former had suicide front doors which opened the other way on the prototype, plus the earlier exposed hinges were hidden in the revised design. With a wheelbase of 3,050 mm, it was 205 mm longer than the 170V body. There was also a long-wheelbase model planned with a 3,450mm wheelbase. Sadly these elegant bodies with slim window surrounds did not survive, but 9,004 units of the OHV engine powered the L1500 A/S Type L301 pickup truck from 1941 to 1944. However, an M159G version of the engine expanded to 3008 cc and fed by wood gas was fitted to a few W153 bodies.

The real stimulus for the new family of engines involved their application as V8 and V12 power plants. The hemispherical cross-flow heads in the M147 4011cc V8 were evaluated from 1938 to

1939. The chassis of the 400 V adopted double wishbones at the front, but there are differing versions of what suspended the rear. Mercedes-Benz archives mention the usual rear swing axles, but a detailed drawing identifies the W160 chassis as having a de Dion rear suspension. Only six prototypes were built, and available images appear to be restricted to small scale models.

It weighed heavily on management-board chairman Wilhelm Kissel that Mercedes-Benz did not have a V12, whereas Maybach did, as well as several other competitors in Europe and America. It did not help that Hitler confidant and board member of Daimler-Benz, Jacob Werlin, suggested at the February 1937 board meeting that Mercedes-Benz simply acquire a license from Maybach to build its DS8 V12 as a Mercedes-Benz. After all, the 540 K already used the Maybach three-speed-plus-overdrive transmission. Fortunately Röhr was able to reassure Kissel that a V12 was on its way, but these concerns elevated the V12 development above all other modular versions of this engine family. In the interim the new 1938 W150 would replace the old W07 7.7-litre straight-eight "Grosser Mercedes."

The 6020cc V12 had a choice of a 3,780 or 3,880 mm wheelbase for the seven-seater sedan or a shorter wheelbase of 3,280 and 3,415 mm for the lighter supercharged version called the 600 K, planned as the 540 K's successor. All V8 and V12 engines had only four main bearings that required water cooling, as well as a de Dion rear axle in place of the customary Mercedes-Benz swing

axles. The second series 770 "Grosser" model W150 also had a de Dion rear suspension.

The V12 engine did see active duty during the war, blinding Allied airmen. It served as a stationary power source on a trailer used to generate power for aircraft searchlights. More than 700 units were built up to mid-1943 at the Untertürlheim plant using the original 6020 cc capacity followed by a 6469 cc version with a slightly wider bore but using a cast iron block with an ideal 60°V rather than the earlier aluminum version with an 80°V (shared with the V8). These later versions, numbering over 2,600, had a single Solex carburetor with twin throttles. Earlier versions had dual carbs.

There were multiple reasons why none of these engines or bodies went into production after the war. Most facilities suffered severe damage from allied attacks and there was little optimism for any new projects. There were also design concerns that there was an insufficient number of main bearings and that their large surface area created high friction. With the arrival of higher octane fuel and the need for higher compression engines, accommodating the valves and spark plugs in a row was problematic. A rather influential chauffeur, Erick Kempka, far preferred the 770 to the smaller capacity 6.0-litre V12, and these sentiments likely reached the ears of Hitler, for whom he drove. Finally, the creator of these cars and engines was no longer around to shepherd their realization.

—Louis F. Fourie

				z Engine Specific ar Engine Protot				
Engine Code Number	M158	M159	M159G	M160	M148	M157	M148 II	M173
Body Application	N.A.	260	N.A.	400V	600V	600K	N.A.	N.A.
Capacity cc	1729	2594	3008	4011	6020	6020	6020	6469
Cylinders	4	6	6	8	12	12	12	12
	IL	IL	IL	80°V	80°V	80°V	80°V	60°V
Bore	80	80	82	82	82	82	82	85
Stroke	86	86	95	95	95	95	95	95
Crankshaft Bearings	5	4	4	3	4	4	4	4
Compression	6.5:1	6.3/6.8:1	N.A.	7.3:1	6.3:1	6.3:1	6.3:1	6.1:1
Carburetion	1 x Solex 1-choke 30 FJ	1 x Solex 1-choke 32 FF JP II	N.A.	1 x Solex 2-choke 32 JFF	2 x Solex 2-choke 32 JFF	2 x Solex 2-choke 32JFFJ Supercharger	2 x Solex 2-choke 32 JFF	1 x Solex 2-choke 32 JFF
Power @ RPM	51 PS 4000	60/68/72 PS 3000/4000	37PS 3200	105 BHP 3500	155 BHP 3400	240 BHP 3600	105 BHP 2200	110/125 BH 2200/2600
Torque mkp @ RPM	11.8 2000	N.A. N.A.	N.A. N.A.	28.5 1420	285 2000	416 2200	N.A. N.A.	N.A. N.A.
Length	N.A.	4800/5200	N.A.	5310	5870/6000	5000	N.A.	N.A.
Width	N.A.	1710/1744	N.A.	1880	2070	1900	N.A.	N.A.
Wheelbase	N.A.	3050/3450	N.A.	3300	3780/3880	3280/3415	N.A.	N.A.
Track Front/Rear	N.A.	1418/1418	N.A.	1500/1570	1600/1650	1475/1500	N.A.	N.A.
Weight kg	N.A.	1610	N.A.	1920	3200-3400	2000	N.A.	N.A.
Tires	N.A.	6.00-20	N.A.		8.25-17	7.50-17	N.A.	N.A.
Suspension Front		Top wishbone, lower			Double Wishbone Coil			
	N.A.	transverse leaf	N.A.	N.A.	Spring	N.A.	N.A.	N.A.
Rear	N.A.	Swing axle	N.A.	de Dion	de Dion	de Dion	N.A.	N.A.
Production years	1938-42	1939-44	N.A.	1938-39	1938-42	1938-42	1938	1942
Quantity	N.A.	1940	N.A.	6	8	7	3,420	Incl. in M148
Installations	170 VX (W158) Prototype	260 (W159) Prototype 1500 (L301) 1941-44	Wood Gas	400 (W160) Prototype	600 (W148) Prototype	600 (W157) Prototype	Search lights Stationary	Search light Stationary



ART, ARCHITECTURE AND THE AUTOMOBILE PART II

Editor's note: This is the next chapter of an eight-part presentation presenting a historical contextual triad of Art, Architecture and the Automobile. The series began with issue #303—the reader is encouraged to refer to that issue, which included an introduction, for added context and understanding of the entire series' presentation.

II. CARRIAGES WITHOUT HORSES, 1898 to 1908

It is described by the dictum form follows function.

The automobile in this period tends to be small with a carriage-like wood body and an engine of one or two cylinders. The evolution of larger more powerful cars began in 1905, and culminated in 1908, which was the last year for the very capable and popular one-cylinder Cadillac. The small one-cylinder Brush remained in the market until 1912, but this and similar cars are considered a variation of the theme and not a pivotal negation of it.

The Craftsman style home exemplifies the dictum *form follows function*. That dictum places an emphasis on craftsmanship, overhanging eves, a porch with substantial supports and finely finished wood interior, which in turn reflects the emphasis on wooden components of many horseless carriages of this era. The image of the street food vendors circa 1906 is presented here as the start of the roadside diner; it is a relevant architectural form in concert with the development of the automobile.

The prominent artistic style of the period was Art Nouveau, which contains flowing curvilinear lines and references to nature, including fish, dragon flies and serpents. The artists spoke of line

as a force, "Every curve gives the idea of movement and life," they said. Those stylistic elements are reflected in the badges on many cars in that era, including the 1903 Ford, the 1903 Oldsmobile and the 1903 Michigan. The tulip-bodied 1906 Cadillac and the exotic snake head horn on the Renault add to the richness of the Art Nouveau elements of nature and its curvilinear "line of force."

This period actually began to evolve in 1905, however, when Packard offered the Model N mounted on a 105" wheelbase and powered by a four-cylinder engine, measuring 4-1/16" x 5-1/8" for 265.7 cid and 28 hp. The introduction of this car is important because it illustrates the difficulty in developing a comprehensive organizational concept with precision. That task cannot be completed without some semblance of flexibility in thought, remembering that



Art: Art Nouveau features images of nature and the serpent, as depicted by this brass horn; it often seen as a characteristic.



these relationships do not imply collusion between the artists and the automotive designers.

When James Ward Packard was asked for sales literature about the Packard automobile, he replied "Ask the man who owns one." The statement encapsulates the personal nature and the personal promotion of the small carriage-like automobile at the time. Both the legend and the slogan live on, although the automobile does not.

—David O. Lyon





Architecture: The artistic trends of the era are reflected in the wood and crafted detail of this vintage craftsman home in Kalamazoo, Michigan.

Architecture: It is not architecture, but the street wagons represent the birth of the urban diner which began as a simple food cart on the city streets.

Art: The intricate curves and details of nature distinguish Art Nouveau pottery.

Automobile: The artistic 1903 Ford rear-entrance tonneau with woven basket and brass accourtements is typical of the Art Nouveau period (inset: The badge on the 1903 Ford reflects the same artistic "line of force" found on the of Art Nouveau vase).







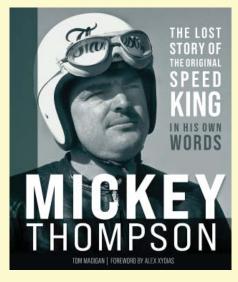
Mickey Thompson: The Lost Story of the Original Speed King in his Own Words

by Tom Madigan Motorbooks (2020)

QuartoKnows.com/ +1 978.282.9590 240 pages, 9" x 10" hardcover, dust jacket 95 b/w and 15 color images, index

Price: \$50

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Onsider: this book was the author's first—more correctly, his first attempt at writing a book. Tom Madigan began interviewing and writing what was to be Mickey Thompson's biography in 1970. Thompson was still very much alive as was the author. Yet by the time this book was published in 2020 both men were dead. Thompson, as many know, was murdered by a hired killer in March 1988 at age 59 and Madigan died of cancer in March 2019 at age 80.

Moreover this first writing attempt was Madigan's last to be published, from an unfinished manuscript that was completed by Mickey Thompson's grandson Travis. Travis, son of Mickey's only child, Danny, writes of his father's at last taking up the challenge Mickey had left him—restoring his famous homebuilt Challenger 2 land

speed, normally aspirated, piston-engined, streamline-bodied contender and achieving the one record that eluded Mickey at Bonneville.

Truth to tell, a more comprehensive account about Mickey Thompson and his varied and extensive accomplishments was told by one-time SAH member and at the time managing editor of AQ, Tracy Powell, in his 2007 article in Automobile Quarterly, Vol. 47, No. 3, Speed Merchant: The Legend of Mickey Thompson.

There are not many (if any?) biographies in which the author devotes so many pages to writing in the first person about himself—and do note that's biographies not autobiographies—but that is not the only aspect of this book that renders it different from the norm.

After abandoning this first effort, Tom Madigan would go on to write and have published several quite good histories of Bill Stroppe, the two Vic Edelbrocks, père et fils, George Follmer, the Justice Brothers and others. None of those had a first-person orientation, for by then Madigan's writing skills had matured just as he had.

Foregoing aside, this book provides insights into Thompson that a more traditionally-structured biography might not. Any and all who knew Thompson recognized he was a force: unendingly energetic, seemingly needing little or no sleep, the epitome of the "energizer bunny" with an intellect and the abilities to conquer most, if not all, challenges he chose to undertake. That he was intolerant of the bigoted and racially prejudiced doesn't usually make the pages of a motorsports figure's biography. This book seems to your commentator more memoir than biography.

It is very much "of worth" for its insights into Thompson's personal thoughts and beliefs, as well as for its narrative regarding the state and growth of so many motorsports venues from the 1950s to 1988—from hot rodding to NHRA drags to Indy to Bonneville to Carrera PanAmericana to BAJA and SCORE to the speed show industry and that of the speed equipment associations and shows—and thus belongs in the library of any motorsports historian whose focus of interest or study is in any of these areas.

It would be unfair to conclude this review without acknowledging Travis Thompson's fine effort to bring this history of his grandfather forward to 2018, and

thereby incorporating some history of his own father. Challenger 2's remains had rested inside a trailer for nearly 20 years until the day Danny finally decided he *would* take up the challenge his dad had left him.

It would take Danny eight years to rebuild (and up-build) Challenger 2. The day did come and he did achieve that elusive-to-his-dad SCTA class AA//Fuel Streamliner record on the Salt Flats of Bonneville. Not part of the book, for it was already at the publisher's printer, but in 2020 Challenger 2 went to a new owner when it gaveled sold for a bit over a half-million dollars at Dana Mecum's auction pre-COVID January sale in Kissimmee, Florida, a fitting conclusion and tribute to *Mickey Thompson*, *The Original Speed King*.

—Helen V Hutchings

Electric Motorcycles and Bicycles: A History Including Scooters, Tricycles, Segways and Monocycles

by Kevin Desmond

McFarland & Company (2019)

McFarlandpub.com/ 800-253-2187

254 pages, 7" x 10" softcover

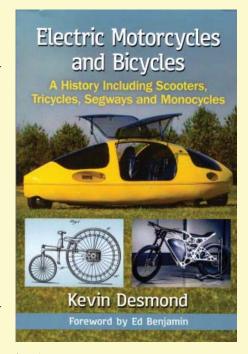
38 images, appendix, chapter notes, selected bibliography, and index

Price: \$45.00

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ISBN-10: 147667289X

ISBN-13: 978-1476672892



Transportation is arguably the hottest frontier in the tech world today. Innovators in Silicon Valley and beyond are

spending billions to build flying cars and self-driving trucks. Believe it or not, an unassuming little electric bicycle may just be a gateway drug into the fun, exciting and environmentally friendly world of electric motorcycles. It's been suggested by many—especially city planners—that electric motorcycles and bicycles have huge potential to solve traffic congestion issues and at the same time reduce pollution levels. Some have gone so far as to advocate the creation of an entirely new license model specifically for electric mobility devices.

That said, despite the long list of benefits of electric mobility vehicles, many people, especially older adults, are simply intimidated by the idea of learning to ride one. While most readers here will still likely cling lovingly to their treasured motorcars, these electric bicycles and related mobility vehicles do fascinate many of us.

At the same time, traditional motorcycling is in a tough spot these days. Harley-Davidson is struggling and many other bike makers who are better insulated from declining sales have seen their sales numbers fall, flatten, or stagnate. Motorcycle-riding baby boomers like some of the folks reading this—individuals who sparked the industry to incredible heights in the 1960s on approachable Japanese machines—are riding less due to their health and, yes, an appreciation of their mortality. New riders aren't exactly streaming into big bike dealerships. Moreover many have been brought up in environments where their personal safety was given top priority at every turn by wellmeaning but non-riding parents, so much so that riding a motorcycle now seems like a high-risk choice to many—if the idea has crossed their busy minds.

Let's just call out the obvious: an electrified bicycle is a low-powered motorcycle, especially if it has that sneaky little thumb throttle that lets you still the pedals and effortlessly breeze along in near-silence. Those are known as Class II electric bikes, and the top speed for most electric bikes in the U.S. is 20 miles an hour, which may sound slow compared to car speeds, but on a bicycle, 20 is a pretty good clip, especially if you're not pedaling. For those that would say these electric bikes are just electric mopeds, much like the smoking buzz bombs of yesteryear, that's not far from a technical truth; but the difference is the technology that powers today's rides. These are true bicycles, with gears and the usual bike stuff, but also disc brakes,

computer-smoothed assist systems, and the latest electric-car derived battery technology. Those old mopeds had pedals mainly for legal compliance. Ever try to pedal one? Not fun, and sometimes not even possible.

So how does this book add to the conversations currently surrounding the evolution of electric motorcycles, bicycles, and related wheeled vehicles? To begin with, author Kevin Desmond admirably grounds his thinking in a detailed history of the electrification of two- and three-wheeled vehicles. Beginning in 1881, isolated prototypes of electric tricycles and bicycles were patented and sometimes tested. Over the years scores of limited editions followed, some selling reasonably well but others finding little market. It was not until the lithium-ion battery became available in the first decade of this century that urban pedelecs and more-powerful open-road motorcycles—sometimes with speeds of over 200 mph—became possible and increasingly popular. (A "pedelec" is a bicycle that has an electric motor to assist pedaling. —Ed.) Today's ever-growing fleets of one-wheel, two-wheel and three-wheel light electric vehicles can now be counted in the hundreds of millions. In this third installment of his electric transport history series, Desmond covers the lives of the innovative engineers who have developed these e-wheelers.

Importantly, the book adds another element to the history of the electric mobility devices with an excellent discussion of racing and speed records. Almost tongue-in-cheek Desmond notes that "the moment an electric motorcycle was timed, it was a record." In this short chapter, you'll learn more about the history of electric wheeled racing vehicles than you'd likely ever imagined. While at points a real slog to read, this is clearly a comprehensive review of electric cycles of the past including those now emergent. It is noteworthy that the photographs in the book are both historical and contemporary, and especially enrich and compliment the narrative.

While a rapidly evolving market exists for these vehicles, at the same time we're seeing many local communities either banning or severely restricting the use of some of these vehicle types. This is especially true of the so-called shared mobility devices docked in municipal locations.

One local upscale community near this reviewer's home has gone further and has sought to ban or regulate "dock-less electric



Magnus Volk, Anna Volk, center, and her sister Deborah in October 1887 in the converted electric dogcart in which the inventor motored up and down the Paradox Resistant England (Payal Payillon & Magnus, Brighton & Resista

This "converted electric dogcart" seen on p.17 resembles the first Benz three wheeler.

scooters and bicycles." That municipality's proposal defines these vehicles as "any wheeled device, other than an automobile or motorcycle, that is powered by a motor; is accessed via an on-demand portal, whether a smartphone application, membership card, or similar method; is operated by a private entity that owns, manages, and maintains devices for shared use by members of the public" at unstaffed, self-service locations.

Other communities surrounding this particular municipality have acted to clarify the laws on such mobility devices. These communities and others argue that such vehicles pose serious safety concerns to both larger vehicle traffic and pedestrians and should be considered a public nuisance. Actions by various local jurisdictions notwithstanding, shared mobility devices remain largely unregulated. Desmond doesn't address these challenges in his book nor does he address vehicle safety considerations. Granted, the work here is largely historically chronological, the lack of attention to safety and regulation considerations is clearly a downside. At the same time these mobility devices do have a huge potential to address traffic congestion issues and reduce pollution levels in cities. In fact, they can be such a boon to cities that some have advocated for the creation of an entirely new license just for electric bicycles, mopeds, and motorcycles.

In the end this book fills an important gap in transportation history. Desmond is a technology historian and biographer, lives in southern France and has published thirty-three books and more than 300 articles related to men and women innovators, many of whom have been either poorly reported on or nearly forgotten, yet people who were behind much of transport innovation over many generations.

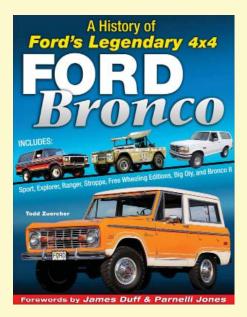
—Ed Garten

Ford Bronco: A History of Ford's Legendary 4x4

by Todd Zuercher
CarTech, Inc. (2019)
cartechbooks.com/ 800-551-4754
192 pages, 9" x 11" hardcover
74 b/w & 378 color images, index,
dustcover

Price: \$42.95

ISBN-10: 1613254148 ISBN-13: 978-1613254141



Ford Motor Company did its homework (a/k/a market research followed by product planning and then development) prior to debuting the Bronco in 1966. What no one knew is that SUVs would become *the* dominant market segment with Ford even announcing it would curtail production of nearly all of its automobile car lines.

Comprehensive in its coverage and nicely written, edited and illustrated, it is very obvious that thought and effort went into chronicling this detailed *History of the Legendary 4 x 4 Ford Bronco*. The timing of its publication couldn't be better because after a twenty-five year hiatus since Bronco production ended in 1996, Ford Motor Company announced it is bringing Bronco back which has set the motoring press a buzz.

Author Todd Zuercher is a 40-year Bronco enthusiast and also the owner of a vintage Bronco, along with an accumulation of literature and documentary materials. He shares his knowledge in a lucid and organized manner on the pages of his book, aided by the skilled editing of Wes Eisenchenk, author of his own Car Tech-published book *Lost Muscle Cars*.

Everything Bronco is shared in chronological order, a chapter for each iteration, i.e. '67 to '69, '70 to '72, '73 to '75, and so forth up to the last model years '92 to '96. Also, there's an additional chapter for the Bronco II which was a slightly downsized version of *the* Bronco. The book concludes with coverage of "Broncos in Competition"—think Bill Stroppe, Parnelli Jones, autocross, drag racing, monster trucks, and more.

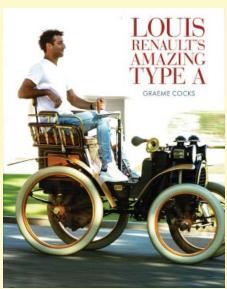
If this is a history useful or of interest to you, this book is as fine and comprehensive a recounting as one could ask for while simultaneously being interesting and readable.

—Helen V Hutchings

Louis Renault's Amazing Type A

by Graeme Cocks

Motoring Past Vintage Publishing (2019)
[First edition published 2017]
motoringpast.com.au
208 pages, 9" x 11½" softcover
84 b/w and 89 color images, index
Price: \$45 (AUD)
ISBN-10: 0987280872
ISBN-13: 978-0987280879



We are always inspired by the tales of the first self-propelled road vehicles, conceived and constructed by young men with technical backgrounds borrowed from nascent industries in every field of manufacture and driven by ambition to solve a problem that had defeated their predecessors for generations. As the author says, "they were like artists with a blank page and only their imagination to guide them." Among them only four automotive names have survived; Daimler, Benz, Peugeot, Renault. This book is the story of Louis Renault who at the age



Renault's mother Louis and brother Marcel in a Renault Type A, seen on p. 87.

of 21 created a motor car that was functional, buildable and saleable.

In the late nineteenth century three sources of power were in use for fixed installations. Either steam or electricity seemed the most practical and internal combustion with its inflexible power curve a distant third. Renault saw the problem, brought out his motor and devoted himself to contriving a propulsion system that could tame the difficult explosion engine. The industry would soon follow his lead. In the early years the design of the transmission and drivetrain became the core of automotive technology, until definitively solved by the perfection of automatic transmissions and front-wheel drive in the 1970s. Renault Frères was a family concern where Louis was supported by the business skills of his brothers allowing him to devote himself to engineering matters. He was the youngest but firmly held the reins of the firm.

Although there are several well-researched histories of the company especially in its prewar years, this book places Renault's achievements in the world of turn-of-the century Paris, his family and associates, his sources of financing, racing victories and instinct for promotion. Overall he appears as a conservative manager although not the domineering master of later times when he had become a national leader in many industries. The book is well illustrated with contemporary images, technical drawings some in Louis Renault's own hand, and patent drawings. Five of the Type As are known to survive. One, the subject of this book, has been restored in Australia and completed the London to Brighton Veteran Car Run. This is a highly recommended book even for those who believe that a 120-year-old car is outside their period of interest.

—Arthur Jones

The Spa 24 Hours: A History

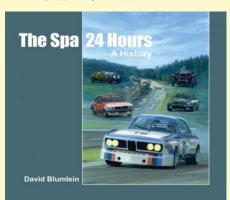
by David Blumlein

Transport Bookman Limited (2014)

224 pages, illustrated ISBN: 978-0-85184-077-2

Price: £40

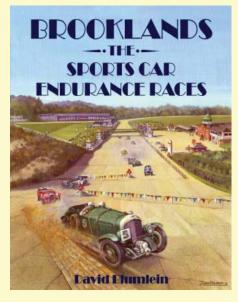
ISBN 10: 0851840779 ISBN 13: 9780851840772



Brooklands: The Sports Car Endurance Races

by David Blumlein Transport Bookman Limited (2020) 178 pages, illustrated, circuit maps Price: £30

ISBN-10: 0995705437 ISBN-13: 978-0995705432



Both books (same author) distributed by: Chater's Motoring Booksellers chaters.co.uk/ +44 (0)1256 765 443

When one thinks of European endurance racing, it seems inevitable that the *Grand Prix d'Endurance, les Vingt-quatre Heures du Mans*, will immediately come to mind. The Le Mans 24-hour event has been around since 1923 after all, with its

only interruption being the Second World War. Not only that but, thanks to the early interest of the Brits there is a significant amount—make that an abundance—of information available in English regarding the race. However, should someone happen to mention another 24-hour race that began just a year after the Le Mans race, more than likely the reaction is a blank stare.

With the appearance of The Spa 24 Hours: A History, David Blumlein provides a much needed look at Les 24 Heures de Francorchamps held on the always daunting Spa-Francorchamps circuit. Following the lead of its French companion, the Spa 24hour event was originally for sporting cars, which then morphed into sports cars, of course. Between 1924 and 1938 there were two gaps, 1935 and 1937, then following the war events in 1948 and 1949, then another gap until the 1953 race. Those last two events, 1949 and 1953, were won by drivers at the wheels of Ferraris, Luigi Chinetti and Jean Lucas and then Nino Farina and Mike Hawthorn, respectively.

In 1964, the 24-hour race was revived as an event for touring cars, with the last such event held in 2000. Grand Touring cars took over in 2001 and continued to do so until today. If this surprises you, do not feel alone. It is doubtful that other than devotees, scarcely more than a few souls have a clue about these races. As it happens, the author got the idea for the book while answering questions from a young motoring journalist during the 2013 edition of the race.

Although it always seems to be something of a cliché when it appears in a review, this is definitely one case where stating that a gap is actually being filled by a book is quite true.

Recently, Blumlein turned his attention to another aspect of endurance racing that certainly deserves that attention: the endurance races for production sporting and sports cars held at the Brooklands Motor Course beginning in 1926 and coming to an end in 1938. In Brooklands, the Sports Car Endurance Races, the author once again dares to tread where few others have. For those interested in all-things-Brooklands, their bible has long been The History of Brooklands Motor Course by William "Bill" Boddy*—the longtime editor of Motor Sport (which, not incidentally, began life in July 1924 as The Brooklands Gazette). In his research for this book, Blumlein spent time at the Brooklands



Chapter 5, The Double Twelve Races (1931)

Library, the Brooklands Archives, and the Vintage Sports Car Library, the latter providing complete runs of *The Autocar*, *Motor*, and *Light Car*, all essential to digging deep into this topic.

The first several chapters sketch out both a general outline of the Brooklands Motor Course and the predecessors of the events that he devotes his attention to in the book. At this point, it is most appropriate to point out that the circuit maps in the book are little short of magnificent. I believe that they are the work of Marcus Potts, who also compiled the excellent index. Along with the photographs that are—thankfully, especially in this day and age-appropriately located where they should be, in the context of the text, the layout and design of the book deserves high praise. Simply skimming through the book before sitting down to read it provides one with the feeling that this is not your ordinary motor racing book.

As suggested above, great care has been taken regarding the presentation of the book, but it is a fair question to ask if the text is equal to the task. In this instance, the answer is: Yes. It is all too easy with such an endeavor to provide the sort of text that makes one's eyes glaze over and the mind become clogged with the all too common turgid "writing" that tends to be passed off as such when it comes to sport and history. While Blumlein certainly does pop in levels of detail that occasionally seem to be there to demonstrate the fruits of his research, one also begins to see where these occasions also provide another aspect too often missing from such works: context.

Much like its topic, *Brooklands, the Sports Car Endurance Races* falls into a niche within both sport and motor sport history that deserves more attention. While certainly the sort of work that at first glance seems to be almost a throwback to the days when British motor racing and its literature were viewed with a sort of *Boys Own* filter and lens in place, with more than a faint hint of jingoism and nationalistic navel-gazing, Blumlein provides us with a narrative that allows us to consider that era, or at least an aspect of it, and wonder when others will begin to revisit this era and do so without the blinders in place.

This is definitely a book that belongs on the bookshelf of notable works addressing the interwar years.

* Which is somehow curiously and mysteriously rendered in the foreword as, *History of the Brooklands Race Track*. That foreword, which by the way is written by Allan Winn, who as it happens, was the former director and CEO of the Brooklands Museum and the current vice president of the Brooklands Museum and Trust. I simply found it so odd that this somehow slipped by everyone.

Slow Car Fast: The Millennial Mantra Changing Car Culture for Good

by Ryan K ZumMallen Carrara Media LLC (2019)

CarraraBooks.com

192 pages, 6" x 9" softcover,

No images, index or bibliography; 10-page section of footnotes called Citations

Price: \$19.99

ISBN-10: 0578560372 ISBN-13: 978-0578560373



Slow Car Fast's subtitle The Millennial Mantra Changing Car Culture for Good is a double entendre and, as a guess after reading the book, it is likely intentional on the part of the author and publisher, Ryan ZumMallen; and yes, he's one of the 73 million or so millennials, a husband, a father, and a journalist with an automotive focus as well as a car enthusiast.

We've all heard or read the lament regarding the collector car hobby's future as marque clubs notice and note the passing of members who are part of the Greatest Generation (1901-1927), the Silent Generation (1928-1945) or are Baby Boomers (1946-1964) and are departing without equivalent numbers of younger folks replacing them. Is that really a valid conclusion or perhaps a mistaken interpretation and understanding of realities? ZumMallen has been contemplating this and chose to organize and communicate his thoughts and conclusions in book form.

One of his observations is ". . . a lot

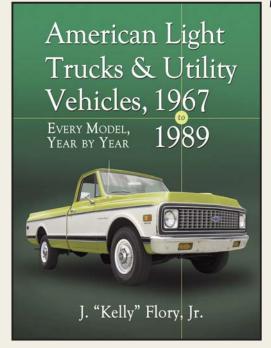
of people [referring to millennial auto enthusiasts] . . . don't want to be measured, scored—they just want a chance to drive their car in a fun, safe, legal environment . . . millennials are people with less time, income and knowledge about their car."

Activities popular with those millennials who are car-centric are the gatherings that generally come under the heading of cars & coffee. With the ease and immediacy of social media, any number of those gatherings are well-supported with enthusiasts bringing their cars and frequently numbering in the hundreds.

There may be other thinking writers who ultimately wish to add their thoughts to those ZumMallen has already penned. Until those thinking writers publish, *Slow Car Fast* is that "must read" for any hobbyist who is genuinely concerned regarding the future of the car hobby and who sincerely is also willing to be part of ensuring its good health and longevity.

—Helen V Hutchings

Special price for a limited time: \$99 \$79





rucks changed dramatically from the 1960s through the 1980s, with the rise of off-roaders, the van craze of the 1970s and minivan revolution of the 1980s, the popularization of the SUV as family car and the diversification of the pickup truck. This comprehensive reference book follows the form of the author's popular volumes on American cars. For each year, it provides an industry overview and, for each manufacturer, an update on new models and other news, followed by a wealth of data: powertrains, options, paint colors and more. Finally, each truck is detailed fully with specifications and measurements, prices, production figures, standard equipment and more.

1472 pages \$99 \$79 hardcover (8½ × 11) 1300 photos, appendices, bibliography, index

In Memoriam

Dr. Paul Sheldon (1940–2020)

r. Kenneth Paul Sheldon was a general practitioner who spent many years at the Idle Medical Centre in Yorkshire. After taking a special interest in the management and treatment of diabetes, in 1995 Paul retired from being a GP and set up the Diabetes Training Centre at Barkerend in Bradford near his home. Under Paul's leadership, the Centre created distance learning programs for diabetes management that were used all over the United Kingdom and Ireland—and even as distant as Oman. The Centre is known as the Primary Care Training Centre and continues to provide medical training programs. In recent years as he turned more and more of his responsibilities to others, he and his wife Betty began to split their time between the UK and the warmer days and nights of France, near Marcigny, which is not all that far from Clermont-Ferrand or Lyon. It was while Paul and Betty were quarantining in place at Marcigny in late June that Paul died quite unexpectedly from what was first thought to be a minor chest infection, but turned out to be a pulmonary embolism.

Paul was one of the founding members of the Formula One Register in 1962 while still engaged in his medical studies. Along with the late John Thompson and Duncan Rabagliati, a London solicitor, the trio established the Formula One Register to compile as comprehensive and accurate a record as possible of the major single-seater events and of the histories of the cars themselves. At the time, the former was daunting enough as a challenge and relatively little attention was paid to the latter. Why the attention to the cars rather than the drivers? Because, as they discovered, the stories relating to the histories of the individual cars were often far more interesting than of those who drove them.

In 1974, the trio of the Formula One Register published their first book, *The Formula One Record Book*, which covered the years 1961 to 1965 when the World Championship was held using the 1.5-litre cars. It was a revelation in that it included the individual chassis numbers for virtually every car that competed in each of the races held during those years as a Formula 1 event whether it was part of the World



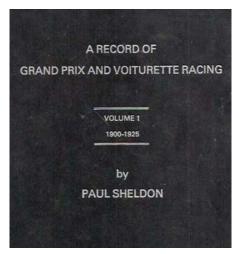
Championship or not. Not to mention that the information often missing from race reports such as the entrant and complete results were included. For many, this book completely changed how they viewed how to approach the recording of motor racing events. I know, I was one of them.

Another minor gem of motor sport history was Paul's *Milestones of the Marques* published in 1976, in which he provided individual histories of a number of cars that competed during most of the first decade of the three-litre Formula 1 that was introduced in 1966. It was a remarkable effort and one that even impressed Denis Jenkinson. In some cases, this is still the only book to consider the "life and times" of the various cars as they competed in the events held during those years.

It was beginning in 1987 and 1988 that Paul and the other members of the Formula One Register their piece de resistance: A Record of Grand Prix and Voiturette Racing. Beginning with the sixth volume in the series in 1987, covering the years 1954 to 1959, and then the fifth volume, 1950 to 1953, the series now has 16 volumes covering the years from 1900 to 2011. Thanks to their stark black covers, the series is known, of course, simply as "The Black Books." A number of the volumes are now in their second, revised editions. The Black Books have also, alas, served as fodder for those populating the internet with information gleaned from the books without any attribution, of course, with many of those doing so having nary an idea as to where the information came from in the first place. It was Paul who took on the job of publishing The Black Books over the years until several years ago he turned that task over to Richard Page.

It was when The Black Books first appeared that Paul and I began our long-

distance relationship, one that evolved into a great friendship. How Paul ever managed to get everything done regarding his medical duties and still conduct the level of detailed research with the other members of the Formula One Register, which naturally expanded as a result of this effort, was often beyond me. Paul was a meticulous, careful researcher of the sort that digs and digs and digs some more. He also had a broad range of interests in motor sport, with the last several years being spent on one of his many passions: a meticulous—that word again-examination of American Sprint Car racing, especially the Silver Crown series. I am honest enough to admit that I threw my hands up when I dug into this series, but Paul persevered and produced what might be the best record of the series in existence. I looked forward to the emails that Paul would send of his latest efforts and more often than not marveled at what he had pieced together.



I must mention that his wife Betty was a partner of Paul's in more ways than one. Her skill with Italian being of immense help to the research so necessary for The Black Books, which also provided one of the great feats of the books, her unraveling of the true story of what happened at the Gran Premio di Tripoli in May 1933, what is often described as "The Race That Was Rigged." When the truth as unveiled by Betty it was even more fascinating and amazing. It was typical of Paul to allow Betty to write the story of what really happened. Gracious is always one of the first words that come to my mind when thinking of Paul.

Along with Betty, sons Mark and Robin, his grandchildren Alex, Zoe, and Luis, and his many, many friends, I miss Paul and I am honored that we were friends.

—H. Donald Capps

