

Formula Vee: For Vision

As SCCA's Most Popular Open-Wheel Class Gets Ready to Celebrate Its 30th Anniversary, We Remember One of the Men Who Made It Happen: Bill Duckworth By L. Kent McBee



Bill Duckworth sits in his creation, the Formula Vee Formcar, before a test session at an abandoned airstrip in Osceola, Fla. in October 1964.

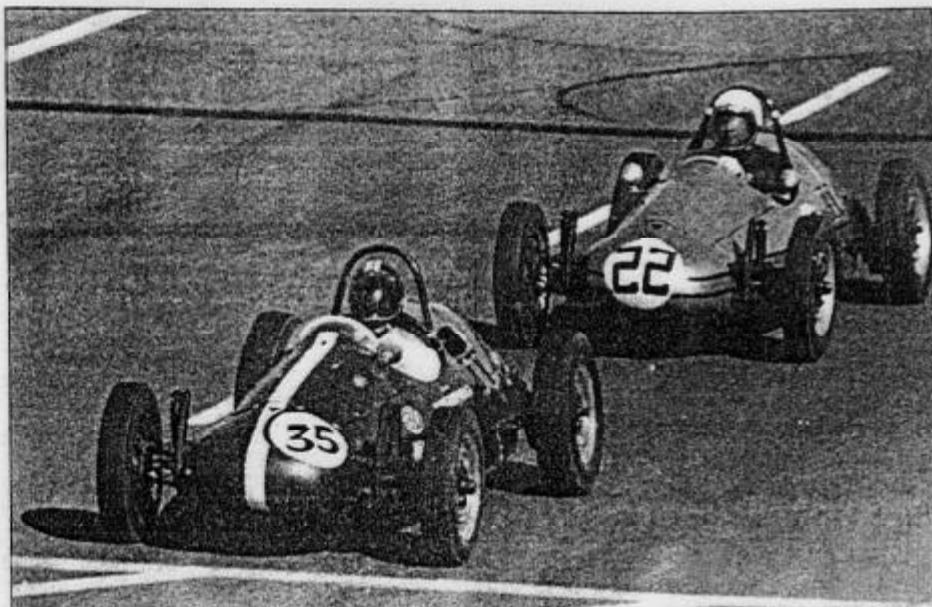
History, according to Webster, is "a chronological record of significant events..." that shape the world in which we live. But in a larger sense, history is written in people's dreams—the men and women who have a dream and, against the odds, make the dream come true.

While his contribution didn't have the potent societal effects of a Christopher Columbus or an Edison, such a dreamer was William "Bill" Duckworth. Out of his dream would come one of the most popular and enduring forms of SCCA racing: Formula Vee.

Born In Orlando, Fla., in 1912, Bill Duckworth was the mechanical one in the family, his father being more inclined to politics, first as the mayor of Orlando and later as justice of the peace. As soon as he was old enough to hold a wrench, the mayor's son was tinkering, and, more often than not, he was tinkering on automobiles. As a young teenager, Duckworth built his own cars and tore up the streets of the sleepy little Florida village. Several times a motorcycle cop named "Bulldog" Rogers tried to catch him, but to no avail—Duckworth's machinery was always too fast. But Orlando was small then, and everybody knew everybody. "Bulldog" simply went to Bill's house, parked his 'cycle across the driveway and waited.

In the late 1920s and early '30s, Duckworth took his racing off the streets and onto the dirt tracks in the area, doing very well. His racing experience and natural mechanical abilities paid off when he opened an automobile repair garage on Edgewater Drive in Orlando.

In 1936, Duckworth married the former Barbara Cheney, whose parents had brought her to the wilds of central Florida from Michigan about two years earlier. Now was the time to be serious, settled, and responsible. Racing and having fun with cars was put away and raising a family became the primary



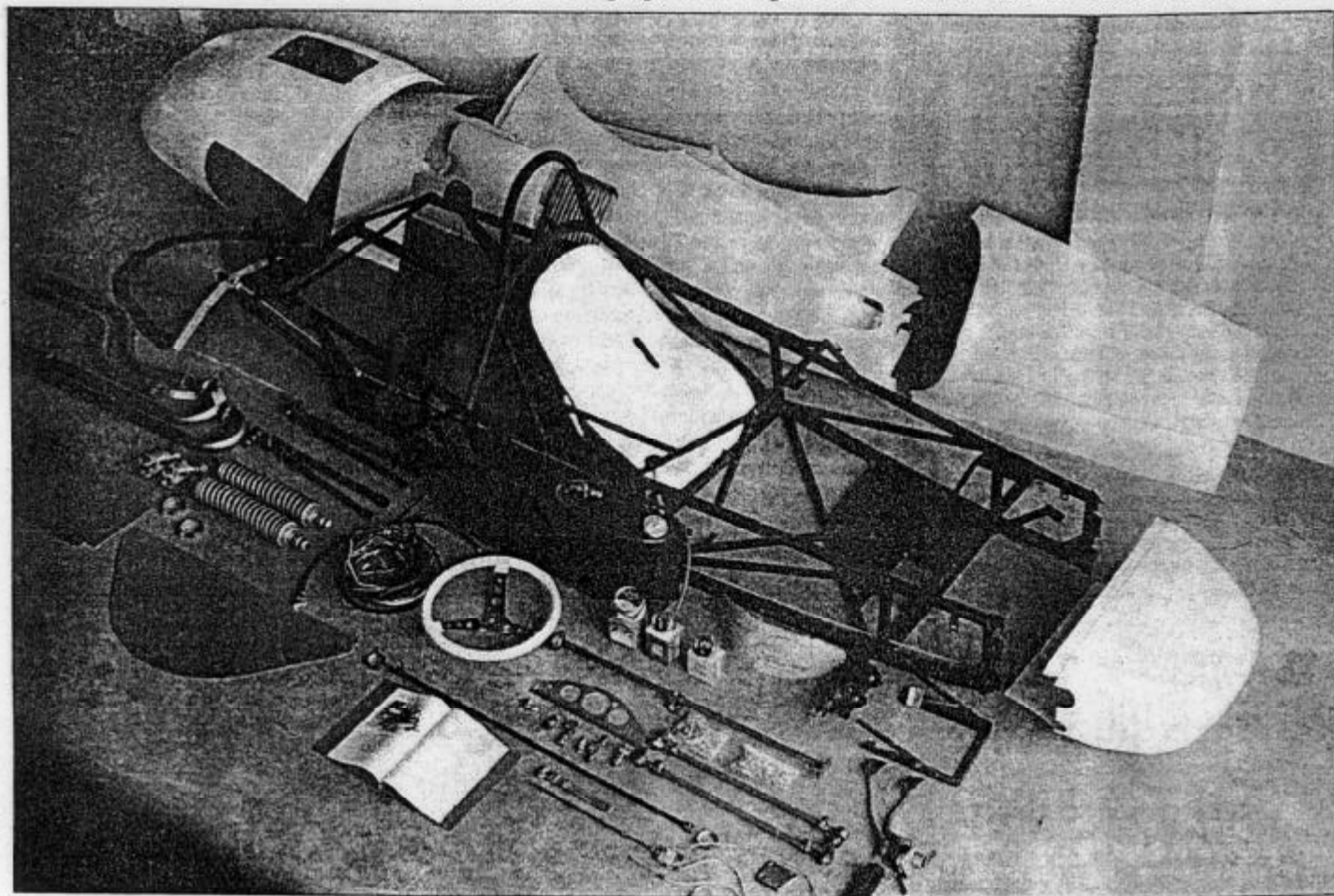
BARBARA DUCKWORTH COLLECTION

At the ARRC in Nov. 1964, Duckworth (22) beat soon-to-be-legendary Jerry Hansen (35) by a wheel for third.

agenda. In time, the couple had two daughters and a son. Bill's repair business was going well, too, but there was a void in his life. Those who have sat behind the wheel of a race car and experienced the thrill of driving "on the edge" know the feelings he must have had.

During 1956, Duckworth and his wife joined the fledgling Florida Region of the

SCCA because they held automobile events that a "family man" could participate in and have fun. "Together" was very important to Bill and Barbara; thus their first interest was in rallying, because it was something they could do together in the family car. Bill would drive and Barbara would navigate as they rallied over the Central Florida roads.



CHARLES ROGERS PHOTO COURTESY BARBARA DUCKWORTH COLLECTION

The first production Formcar kit, sold Dec. 26, 1962. Without Volkswagen suspension parts, engine or transmission, the Basic kit was \$945—and was never increased.

PRINCIPAL SPECIFICATIONS

Weight:	825 lbs., complete, less fuel but with lubricant aboard.
Wheel Base:	82 inches, plus or minus one inch.
Traction:	Stock Volkswagen drive or rear.
Engine:	Volkswagen sedan or transporter (1192 cc.)
Coloration:	Stock Volkswagen. Permitted—any available jet color.
Ignition:	Stock Volkswagen. Tuning must be done to interfere with the normal battery-charging function of the generator.
Transmission:	Stock Volkswagen synchromesh.
Differential:	Stock Volkswagen.
Suspension:	Front—stock Volkswagen, lower torsion bar replaced by modified inch anti-dive bar. Rear—Coil-spring, inch, tube rod control.
Frame:	Space type constructed of mild square section steel.
Body:	Full Fiberglass paneling for economy of replacement.
Wheels:	Stock Volkswagen.
Tires:	See optional.

FORMCAR PRICES

BASIC KIT

Consisting of: Frame. Front sway-bar. Steering tie rods. Front suspension mounting brackets. Rear shock coil units. Rear trailing arms. Battery holder. Battery cables. Brake shoe clutch pedal cluster. Brake lines. Master cylinder. Accelerator pedal. Control cables. Gear shift lever and rod. Exhaust pipes. Wind screen. All body panels ready to snap on frame. Steering wheel. Steering shaft. Electric instruments. Dashboard. Oil temperature gauge. Oil pressure gauge. Seat. Gas tank. Macraméous bucket, pulley and hardware. Belly pan. Fire wall. Assembly instructions.

\$945⁰⁰

* Above price subject to change with no notice. Some items may be added where applicable. All prices F.O.B. factory. Crating additional when required.

DELUXE KIT

Complete parts listed in "Basic" Kit, plus engine, transmission, oil, fan, fan belt, fan shroud, front suspension complete. Does not include wheels, tires or battery.

\$1,995⁰⁰

ASSEMBLED, READY TO RACE

Standard body is white. Paint options may be chosen to be included in body payment in additional cost.

\$2,495⁰⁰



ONE WHEEL A CAR
A car you that is... and that's about the only way you can call the Nardi the prototype of the Formula Vee breed from the front... The Nardi, built in 1961, is a good example of why Formula Vee means to be practical. The car is still going strong and, in the right hands, will still win. In Formula Vee, all cars are equal and every one counts.

MANUFACTURED BY

FORMCAR CONSTRUCTORS, INC.
Box 1985
Orlando, Florida

LICENSED MANUFACTURER

BURGESS ENTERPRISES
P. O. Box 646
Littleton, Colorado

First Formcar sales brochure showed Nardi (# 10) as "prototype of the Formula Vee breed," touted fun-factor.

Duckworth also began doing some hillclimbs. It was like racing, but not really. Good for a family man.

Then in 1961, the seed for Bill Duckworth's dream was planted. He was attending a road race in the area and saw a Nardi—an Italian-built, Volkswagen-powered, Formula Junior race car prototype which had been commissioned by Miami VW dealer Hubert Brundage as a more affordable FJr. The simplicity of the design and ready availability of the power plant piqued his interest and set the wheels inside his head spinning. He was not alone. George Smith, a retired USAF Colonel, active insurance agent, racing enthusiast and National SCCA Board of Governors member, was also interested in the Nardi and the potential it held. Smith sought out Duckworth and the two men put together plans that would eventually have a dramatic impact on the sport they both loved.

Their idea had been used successfully in sailing for several years: the Star Sailing class—a single make of boat for all race entrants, so that one's sailing ability became the true test. Smith and Duckworth's vision was for a single-make class of racing cars, powered by 1192cc Volkswagen engines, using Volkswagen suspension and street tires. It was to be a class that anyone could afford to participate in and one where driver ability—not pocketbook size—determined winners. Rather than use a letter designation for their "formula" (they were afraid the letter "V" for Volkswagen might be misread as the Roman numeral for five), they decided to call the class Formula "Vee."

The dream began to gain momentum when the pair purchased from Brundage the rights to the Nardi design. Brundage had become frustrated. The car was not a very successful FJr. and his attempts to

put-it into production in the U.S. had not gone well with two pilots from Miami he had hoped could manufacture it. For \$1 each, he sold the original Nardi and a copy built by the pilots to Duckworth and Smith. The two new owners tore down the Nardi and began making plans for their own design.

In July, 1962, Smith and Duckworth incorporated Formcar Constructors, Inc., with Smith as president and Duckworth the vp and production manager. By this time, the duo had already built a car in the corner of Duckworth's Orlando repair shop, tested it, sought and received approval from the SCCA for a Regional Formula Vee class to begin racing in 1963.

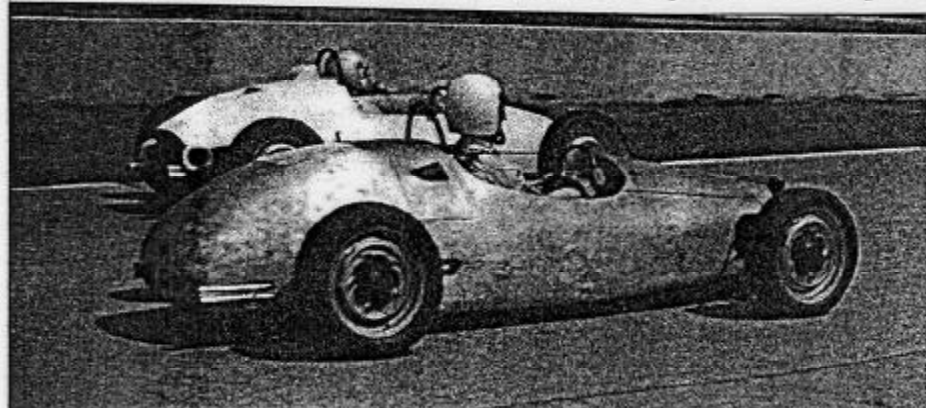
Production now began in earnest. The first three cars were sold in November and December, 1962, with chassis No. 62-1 going to Robert C. Smith of Atlantic Beach, Fla. During these early stages, Duckworth himself built the frames, made suspension pieces and other parts. Fabrication of the body panels was subcontracted to Don Stuart and George Taylor (also of Orlando).

Formcar offered their Formula Vees in both kit form and as complete race cars. Basic kits (unassembled and without VW parts) sold for \$945; complete kits (everything you needed, but unassembled) sold for \$1,995; and finished, race-ready cars went for \$2,495. Even in 1962, these were "everyman" prices.

After the first three new Vees spent a successful weekend at Savannah-Effingham Raceway in Georgia, the orders started to roll in. It's easy to see why. In a preliminary race, the Vees started at the back of a field of Porsches, Triumphs, Austin-Healeys and Sunbeam Alpines. At race's end, they finished one, two, three overall. For the weekend's feature race, the three Vees were started up front and lapped the entire field except for the fourth-place car. Weighing just 825lb (without driver), the little cars could hit 105mph and were, according to a *SportsCar* article of the day, "a real ball to drive. I found I could go deeper into the corners than anything on the track, with the possible exception of some of the late Formula Juniors..."

Formula Vee took off. The class grew so quickly that, during the second year of business, Formcar Constructors, Inc., underwent dramatic change. Bill closed his Edgewater Drive repair garage and began building race cars full time. Later the same year, he and Formcar's five employees moved to new, larger quarters on Central Avenue. The company set up 12 U.S. distributors, and franchised Burgess Enterprises of Denver, Colo., to build cars for West Coast customers. Inquiries and orders came from England, West Germany, Holland, France, Sweden, Italy, Australia and Switzerland.

In 1964, SCCA recognized Formula Vee as a National class. In keeping with



DAN SCHLOSSER

At Vee's 25th anniversary celebration, original Nardi (foreground) and a Formcar took some honorary laps.

PARTS LIST
FORMCAR FORMULA-VEE KIT

Accelerator Linkage.....	8.00
Accelerator Pedal Assembly.....	7.28
Air Duct Baffle.....	14.00
Anti-Roll Bar Assembly.....	18.00
Battery Box Assembly.....	11.50
Battery Cable.....	5.50
Belly Pan.....	9.00
Body Assembly.....	243.00
Brake and Clutch Pedal Assembly.....	11.34
Brake Lines.....	9.00
Clutch Linkage.....	9.50
Exhaust System.....	48.00
Fire Wall.....	9.50
Frame Assembly.....	293.00
Front Suspension Mounting Brackets - pair.....	8.00
Gear Shift Assembly.....	28.00
Grille.....	20.35
Ground Strap.....	1.50
Instrument Panel.....	8.00
Master Cylinder, Dual.....	19.50
Oil Pressure Gauge.....	9.00
Oil Temperature Gauge.....	19.50
Shock Absorbers.....	12.50
Shock Absorbers - pair.....	25.00
Steering Wheel.....	20.00
Steering Wheel Hub.....	5.00
Steering Wheel Shaft.....	18.00
Steering Wheel Support.....	6.00
Tachometer.....	36.00
Throttle Assembly, Fuel, Valve and Line.....	34.00
Trailing Arm.....	36.00
Windscreen Assembly.....	11.00
Wiring Harness.....	22.00
Late shock absorbers early	7.50 7.50

FORMCAR CONSTRUCTORS, INC.
1229 West Robinson Avenue
Orlando, Florida
Phone: 435-7390

Original Formcar parts price list—affordable racing.

Smith and Duckworth's desire to provide affordable, driver-determined racing, a Formula Vee Driver's Association was organized. It was comprised of Vee owners, and rule changes to the class would only be made with their approval. The rules allowed for other manu-

facturers; and by late 1964, Gene Beach (Competition Components), Ray Caldwell (Autodynamics) and Ed Zink began building cars for the class, too.

By 1966, Formula Vee had become the most popular class in the SCCA. But Formcar Constructors was no longer a part of it. The year before, Smith and Duckworth had closed their doors, partly because of the stiff competition from other manufacturers and partly because modifications allowed by the Drivers Association drove up the prices of the little cars. Higher-cost race cars were not what Smith and Duckworth had in mind. During its two-plus years in business, Formcar had built and shipped over 200 cars, and set the racing world on its ear.

With Formcar closed and his future comfortably secure from investments made in stocks and bonds over the years, Bill Duckworth now retired at the ripe age of 53. He would spend the remainder of his life alternating between Orlando and a retreat he and Barbara had in North Carolina. He played racquetball at the YMCA several times a week to stay in shape and work off his competitive urges, but he never got involved with racing again in any capacity.

Having never known Bill Duckworth personally, I don't know if he realized the impact he had on the SCCA and on the sport of racing. His dream of affordable,

driver-centered racing came to fruition, and carries on today. Formula Vee has changed over the years, but it's still one of the most competitive and least expensive classes enjoyed by SCCA racers and the most popular open-wheel class.

In August, 1991, Bill Duckworth passed away at the age of 79. His obituary says he was a lifelong resident of Orlando, retired from the automotive business, and that he is survived by his wife and three children. But to those of us who race—especially Formula Vees—his dream has affected our lives in a wonderful way. Men like that need to be remembered. ■

Long-time Central Florida Region member Hugh O'Neal sent me a note about Bill Duckworth and put me in touch with his wife, Barbara. I spent an evening with this wonderful lady, gathering material for this story and watching her eyes sparkle as she spoke of Bill and "the years we built race cars."

"It was an exciting time," she says, "shipping the cars to Europe and all over the U.S." You could tell she was proud of what Bill had accomplished, and happy that it would be shared. For support, Barbara loaned me Bill's scrapbook, containing much of the documentation for the formation of Formcar, early orders, lists of distributors, letters of inquiry, articles and photos/brochures of the car. I felt honored to be so close to a part of the history of a sport I hold so dear and to see the results of a dream come true. —L. Kent McBee