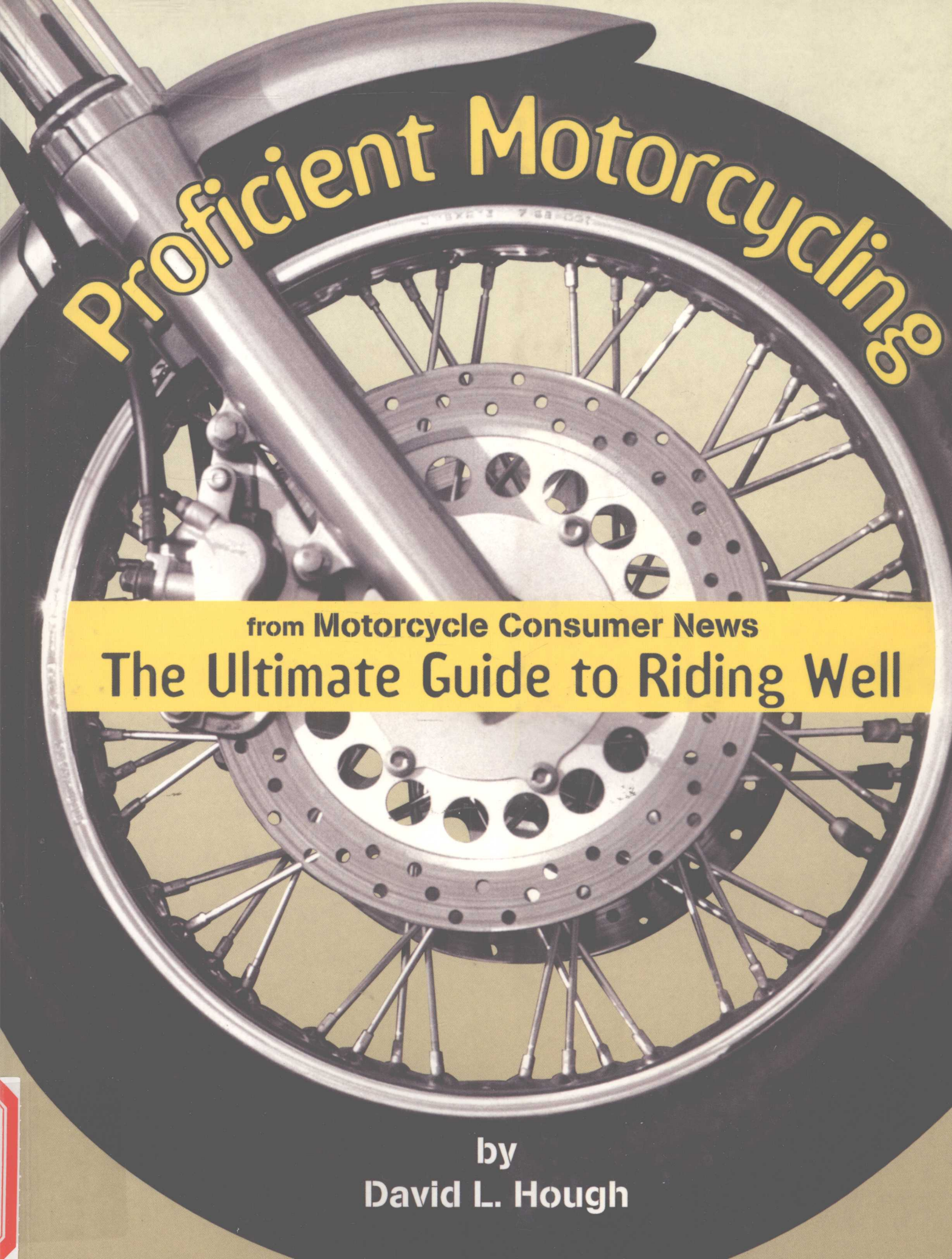

Proficient Motorcycling

from Motorcycle Consumer News

The Ultimate Guide to Riding Well

by

David L. Hough

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BOWTIE PRESS®

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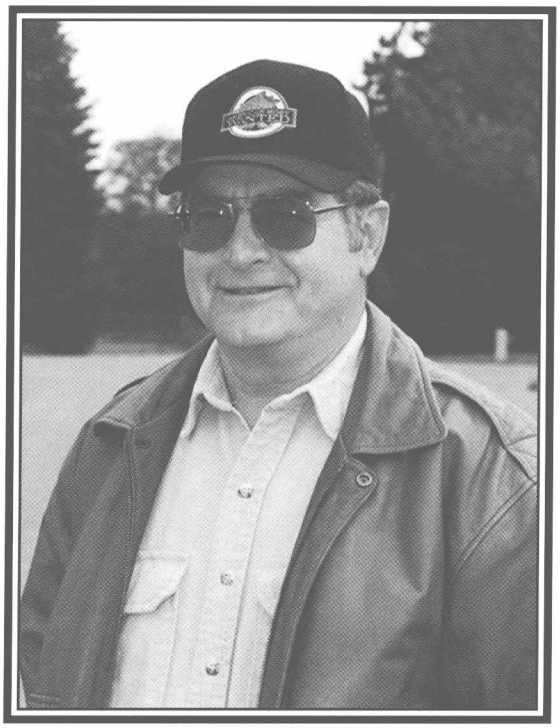
Proficient Motorcycling

DEDICATION



While the contents of this book are really a collective wisdom gleaned from fellow motorcyclists and the school of hard knocks, two individuals were instrumental in allowing this book to come to life.

First, it was Bob Carpenter, the editor of *Road Rider*, who salvaged my first article back in 1972. Bob encouraged me to keep submitting, showed me by example how to write, and then suggested I tackle the "Proficient Motorcycling" series that eventually served as the basis for this book. Thanks, Bob. It's been quite a trip so far.

Second, my wife, Diana, has been tolerating my travels, travails, and tantrums since we got married. She has accompanied me on many long motorcycle journeys on a variety of motorcycles that weren't very comfortable; endured more than a few cold, wet, windy days; put up with my motorcycling fanaticism for the past thirty years; and kept me moving on this project even when I would rather have gone riding. We got married in a little country church on Bainbridge Island forty-three years ago, and we're still together. Pretty amazing, huh?

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Foreword

Like most motorcyclists, my initial rider training (if I dare call it that) came in the form of a salesman pushing a bike off the showroom floor into the parking lot and pointing out its control features to me. "This is the throttle and this is the clutch. Your left foot does the shifting—down to first gear, then up to each of the other four—and your right foot does the braking. There's a front wheel brake at your right hand, but try to avoid using that."

With that, he kick-started the little Kawasaki and held it for me to climb aboard. After about 15 minutes of wobbling around the parking lot, getting a feel for the strange beast, I went back into the dealership, wrote a check, and within a few minutes was out on my own, dicing my way through city traffic at rush hour.

I'm very lucky to be alive today.

I believe the year was 1973, and with my new-found interest in two-wheeling I immediately went to a newsstand and purchased every motorcycling magazine available. Luckily for me, one of those publications was a fairly new one called *Road Rider,* produced by a renegade publisher in California named Roger Hull. And within its pages I found, during the ensuing years, the wisdom that I credit with keeping me alive and riding to this day. Most of that wisdom came in the form of detailed instructions on how to ride a bike safely and efficiently, written by one David L. Hough.

I read David's semi-regular articles for the next fifteen years or so, often carrying a dog-eared copy of the magazine with me to a vacant parking lot, where I could practice the procedures he outlined. Then I would stop and read them again, then practice again, and on until I achieved the desired results in cornering, braking, obstacle avoidance, etc.

Eventually I discovered a professional motorcycle riding academy, and signed up for their training courses. I suppose I expected to learn something new and different but was surprised to find that the teaching texts and range exercises were nearly identical to those I had learned from Hough's "Proficient Motorcycling" magazine series. Many years later I would discover that nearly all of the private and state-run riding schools that sprang up during the great motorcycling boom of the seventies were based on David's prolific output in one way or another, whether they credited him with it or not. In fact, to this day I often find exact, word-for-word copies of David's nearly thirty-year-old writings being used and repeated on the Internet, in newsletters and magazines, and as training materials in schools around the world—without one word of credit as to their source. And I don't believe David has ever made a dime off of, or even complained about, this rampant plagiarism of his life's work.

My love of motorcycling eventually led me away from my engineering career and back into college for journalism training, after which I became a full-time writer and eventually the editor of a motorcycle club magazine called *Wing World* in Phoenix, Arizona. Then, several years later, through a series of odd twists of fate that would seem ludicrous if they were fiction, I came to California to accept the post of managing editor at *Road Rider*. Immediately, I set about attempting to resurrect "Proficient Motorcycling," which David had ceased writing, believing he, "had said all there was to say on the subject."

Through his mentor, *Road Rider's* editor, Bob Carpenter, I tracked David down in

the wilds of northern Washington State, and began badgering him to revise and revive his much-copied series. He was reluctant at first, but I convinced him that there was a whole new crop of riders that had grown up since his initial series who were entitled to the same life-saving teachings that I myself and so many like me had benefited from.

Luckily for me, he eventually agreed, and the next generation of "Proficient Motorcycling" was born in January of 1991 in the pages of *Motorcycle Consumer News*, the offspring of *Road Rider*, which Bob Carpenter and I created that year.

In the nearly ten years since then, David has written over one hundred new "Proficient Motorcycling" articles, also contributing all of the photography and drawing all the detailed diagrams and sketches for the training exercises. "Proficient Motorcycling" has won several awards, not the least of which was the National Motorcycle Safety Association's award for "Excellence in Motorcycle Safety Journalism"—twice. In his spare time, David has produced the world's first comprehensive training system for sidecar operators. He has also served as a consultant on motorcycle safety and training issues for the Motorcycle Safety Foundation, the American Motorcyclist Association, the Motorcycle Riders Foundation, the State Motorcycle Safety Administrators Association, and too many other groups to mention, both here and abroad.

But beyond all the awards and accolades, I believe David received his greatest recognition in the summer of 1999. He came down from his Washington cabin to California for a week to participate in a "Meet the Staff" ride put on by *Motorcycle Consumer News*. On Saturday morning, nearly one hundred riders from all over the U.S. gathered at our offices, and we rode together through the Santa Rosa and San Bernardino Mountains to the Mojave Desert with David bringing up the rear. At our lunch stop, speaking to a group of the riders, David commented that the state of rider education in the country must be better than he had thought, judging by how well this diverse group had ridden through the mountains. He was impressed with their riding skills and told them so. Then one of the older riders spoke up. "Hell, Dave, we're just practicing what you been preachin' to us for all these years. I don't know about these other folks, but I ride well because I learned it from you!" He looked around himself, and suddenly everyone else began nodding their heads and adding their comments and thanks to what had been said.

I have known David Hough for many years, and he is not an emotional man, nor one to take undue pride in himself, or even take himself too seriously. But I guarantee I saw an extra bit of bounce in his step for the next couple of days.

Whether you are a novice to motorcycling or a seasoned old campaigner, I think I can safely promise that there's something in this book for you to learn. Something that will make you a better rider than you were before reading it. And afterwards, you'll join the thousands of other riders, like myself, who owe David Hough a debt of gratitude we can never hope to repay.

Fred Rau
Senior Editor
Motorcycle Consumer News

Preface

I've always been interested in how things work. I remember taking apart my new cap pistol when I was six years old, and then hiding it when I couldn't get all the springs back inside. After a few more years of dabbling in things mechanical, I could overhaul the planetary-geared hub on my bicycle and respoke wheels. I worked on outboard motors and built a few boats. In college, I took some mechanical engineering courses and learned about machining, casting, and welding before I switched over to industrial design. I started maintaining the family automobiles out of necessity, and when we needed a new house for a growing family, I learned concrete work, carpentry, plumbing, and electrical.

When I started riding motorcycles back in the 1960s as a way to get to work, it was natural for me to wonder about the curious behavior of two-wheelers. I realized that riding motorcycles involved not only mechanics but also the dynamics of how to control them. My commute to work by motorcycle eventually extended to a thirty-year passion. I absorbed more than a few lessons about motorcycle dynamics and experienced the joys and challenges of long-distance touring, group riding, foreign travel, three-wheeled motorcycling, off-pavement riding, fighting for motorcyclist rights, rider training, and, yes, writing about it all.

In the mid-1970s, I started putting down my thoughts on paper, contributing occasionally to *Road Rider*, a small southern California touring magazine with a fiercely loyal family of subscribers. I began to offer safety tips at the local motorcycle club meetings and taught several "road survival" courses. When the Motorcycle Safety Foundation (MSF) came into being, I became MSF certified.

The "Proficient Motorcycling" column sprang to life in the May 1984 issue of *Road Rider* after editor Bob Carpenter asked me to write a six-part skills series, which he intended to publish every other month for one year. I didn't want to call this a safety column because I didn't think people rode motorcycles to be safe. I figured readers might rise to the challenge of getting more proficient. So I named it "Proficient Motorcycling." Little did we realize at the time that "Proficient Motorcycling" would outlive *Road Rider*, capture a few awards from the motorcycle safety folks, stretch out another fifteen years, and start a trend toward the inclusion of riding skills articles in other enthusiast publications.

By 1991, *Road Rider* magazine had been purchased by Fancy Publications and was reborn as *Motorcycle Consumer News (MCN)*, a black-and white, advertisement-free, no-nonsense, quick-turnaround, product-oriented monthly. The "Proficient Motorcycling" column jumped the gap from *Road Rider* to *MCN* almost without skipping a beat, and seventeen years later it is still a popular feature of the magazine.

Over the years, since "Proficient Motorcycling" had become a staple of *MCN*, more than a few readers have asked two questions again and again: *How do you pronounce Hough?* and *When are you going to publish all the "Proficient Motorcycling" columns as a book?*

Hough is pronounced like "tough." And the book? Well, here it is.

—David L. Hough

Introduction

Begin at the Beginning

I've been trying for years to break the taboo about discussing the risks of motorcycling. Motorcyclists know instinctively that the risks of riding are higher than those associated with other vehicles, but there seems to be a general consensus that ignoring the risks will make them go away. Certainly, motorcycle salespeople tend to sidestep the safety issue for fear of squelching a sale. Most motorcycle magazines focus on the bike as a machine or a lifestyle or an addictive pursuit, but seldom will one find articles on how to control a bike or how to get through traffic unscathed. If a motorcyclist is still trying to convince his or her family that riding a two-wheeler is an acceptable mode of transportation, maybe it would be smart not to bring up the risks. In my opinion, it is possible to reduce the risks of motorcycling to an acceptable level.

In *Proficient Motorcycling*, the subject of risk is faced openly and honestly. Yes, motorcycles are potentially dangerous, but whoever is holding the handlebar grips can significantly change the odds. If you want to avoid pain and lost dollars, you need to understand what the risks are and take positive steps to control any situation to your advantage. The proficient motorcyclist knows what trouble looks like and has the skills to avoid whatever happens along. The big payoff is that becoming a proficient motorcyclist is immensely satisfying.

In the name of efficiency, I've often stacked up a lot of hazards in close order even though I know that can be a bit intimidating. A novice rider faced with all these hazards might consider just parking the bike and hanging up the key. In real life, however, one person is not likely to encounter hazards as frequently as I've tossed them out. The point is for you to be aware of hazards that have caused other riders grief. If you can learn from the mistakes of others, hopefully you won't have to learn it all through trial and error.

Every attempt has been made to keep discussions of motorcycle dynamics simple, but some people may still have difficulty understanding the concepts. Sometimes they won't become clear until you take the book out to the garage and experiment with your motorcycle, or until you take your machine for a spin and listen to what it's telling you. And if you don't feel comfortable with any of the riding exercises suggested in the book, perhaps you should be practicing under the watchful eye of an instructor at your local rider training site.

When experimenting on your bike or practicing a skill, please wear your best crash padding. The subject of protective riding gear alone can take up an entire book. In other words, I'll try to give you all the no-nonsense information

I can, but this is only a book, not a training course. So for the purposes of this book, appropriate protective gear includes abrasion and impact resistant full jacket and riding pants, tall leather riding boots and full-fingered gloves, a genuine Department of Transportation– (DOT–) approved helmet, and shatterproof eye protection.

This book is based closely on the "Proficient Motorcycling" column from *Road Rider* and *Motorcycle Consumer News.* It includes the core knowledge and skills that the proficient motorcyclist should possess. You can study this book in any sequence you choose, but the contents are arranged so that one subject leads to the next. It will probably make more sense to you if you start at the beginning and read through to the end.

Throughout *Proficient Motorcycling,* you'll meet characters such as Biker Bob, Rider Ralph, Cruiser Carla, and a few others who may seem familiar to you. Be aware that the characters in this book are fictitious, although most of the situations are based on real accidents and incidents. You may even recognize a bit of yourself in these fictional folks. Think of these tales of woe as myths, which may not be exactly true but have the potential to be learning experiences. In some cases I know I've played the part of "Bob" myself. Please do us both a favor and don't get hung up on the names or the gender.

You'll notice that once in a while a mysterious *we* offers advice. That's because I get a lot of feedback from veteran motorcyclists, rider training professionals, and other journalists, and the advice reflects this feedback. Even when I go out on a limb, most of my information is a collection of knowledge I've gleaned from a widespread family of motorcyclists.

Consider this book only the beginning of a journey toward becoming a proficient motorcyclist. Ten years ago I mentally added up the various bikes I'd ridden and figured I'd accumulated about 750,000 miles. I haven't bothered to keep a tally since then, because I'm more interested in the lessons than the miles. One thing I know: Over the horizon, there are many other lessons waiting to be learned.

Risk!

RISK!

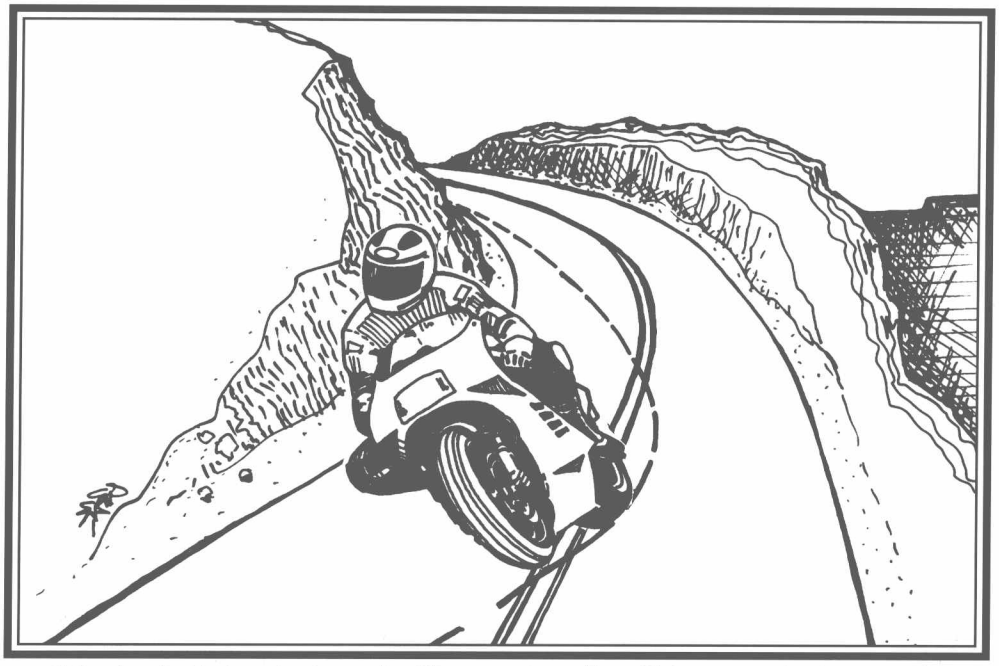
Risk!

RISK!

CHAPTER 1
RISK!

Canyon Bites

August 23, 1998: A sunny Sunday morning in the Colorado mountains. Perfect weather. Light traffic. The pavement is clean and dry. Norman and Christine are motoring eastbound through scenic Boulder Canyon, enjoying the ride and the view. Both riders are wearing protective gear, including high-quality full-coverage helmets. Norman is paying attention to the curves, planning good cornering lines, and keeping his Suzuki well in control.



Notice where the rider is crossing the centerline. When you are approaching a blind curve, remember this image, and make a point of avoiding the critical area.

Westbound, Mark and three of his buddies on fast sportbikes are dicing with each other, enjoying their race-bred machines, the excellent road conditions, and the rush of friendly competition at the spirited pace, showing little regard for the speed limit or the double yellow lines. At the moment, Mark is slightly more willing than the others to jack up the risks, and his Honda is pulling ahead of the pack.

Just east of Hurricane Hill, Norman slows the Suzuki for the sharp blind turn through the rocks, and leans the bike over into a nice curving arc that should kiss the centerline just at the apex. At the same instant, Mark carves into the same turn west-

bound on his Honda, realizing too late that the curve through the rocks is tighter than he had assumed. There is nothing Mark can do to prevent the Honda from drifting wide across the double yellow lines, right into the path of the approaching Suzuki.

Frantically, Norman shoves his grips toward the right to swerve the Suzuki away from a 100 mph head-on collision, and Mark pushes so hard on his grips that the Honda low sides in a shower of sparks and plastic. The Honda's tires clip the Suzuki just hard enough to send the Suzuki cartwheeling into the rocks. Norman dies instantly, his helmeted head ripped from his body. Mark tumbles to a stop, bleeding profusely but alive. A second later, Mark's buddy carves around the corner and spins through the mess of wadded-up bikes and bodies. Norman's wife, Christine, dies an hour later at the hospital.

This is a true story, and we're not relating it just to gross you out. Similar accidents occur over and over again to weekend motorcyclists on various twisty highways across America. And, yes, there is a moral: If you want to survive those entertaining twisties, it's not enough just to cruise along minding your own business. You've got to plan for the stupidity and arrogance of other motorists, including other motorcyclists. Let's consider some practical tactics for avoiding such "canyon bites" on your weekend rides.

The Double Yellow

Years ago, road crews were more frugal with those double yellow lines. We could pretty well depend on the double yellow no-passing zones warning us of hazards such as dips where another vehicle might be hidden from view. These days, road engineers continue to extend the double yellow lines farther and farther, until some highways are double-yellowed from one end to the other. If you're riding a quick motorcycle, it's frustrating to hang back behind a creeper car when you can see the road is clear and you know you have plenty of zip to get around. More and more of us are giving in to the temptation to just ignore the yellow lines and get on with the ride.

Legally speaking, it's no more illegal to pass over a double yellow than to exceed the posted speed limit, but the laws of physics are self-enforcing. Being on the wrong side of the road at warp passing speeds is certainly an invitation to a head-on collision with a car that may suddenly appear from around a corner, or a farm truck chuffing out of a hidden side road. You'll have to decide for yourself when and where you are willing to risk passing over the double yellow. My advice is to never ever be out in the wrong lane while crossing a bridge, approaching the crest of a hill, or rounding a blind curve. But what about a long uphill sweeper, where you can see the road 8 or 10 seconds ahead? What about a wide intersection with no one in the left turn lane? And when you come up behind a vehicle waiting to turn left from a busy two-laner, is it smart to come to a sitting-duck stop, or should you swerve over onto the shoulder, pass on the right, and keep moving?

Regardless of the law, before you decide to zip around any slow-moving or stopped vehicle, take a good look at the situation and try to figure out what's happening and what's about to happen. It's not just you and the road out there. Is there a side road or driveway into which the other vehicle could turn? Is there a tree-shaded intersection ahead from which another vehicle could suddenly materialize? It's unwise to pass in any areas where there are roads or driveways along the highway, even if it isn't a no-passing zone. And before you pull around a stopped vehicle, take a good look behind you to ensure that someone else isn't in the process of zooming around you.

Sight Distance

We often use the phrase, *adjust your speed to sight distance.* Let's be specific about what that means. At any given speed, a certain minimum distance is needed to stop a specific motorcycle. If you expect to avoid that wild deer or those motorcycles splattered on the pavement just around that next blind turn, your speed must be limited to your stopping distance. For example, let's say your machine is capable of coming to a stop from 60 mph in 120 feet. If you can't see any farther ahead than 120 feet, your speed shouldn't be any faster than 60 mph.

Of course in real world situations, it also takes a half-second or so to react, and another second of progressive front brake squeeze to get full on the stoppers. At 60 mph, 1.5 seconds will eat up an extra 132 feet. *Uh-oh!* That means that your actual stopping distance from 60 mph is more like 252 feet. If your sight distance is only 120 feet, your speed should really be no more than perhaps 40 or 45 mph.

While we're riding, very few of us can accurately judge distance in feet, yards, meters, or car lengths. The pavement goes by in a blur, too quickly to make a mental measurement of distance. The trick is to make time measurements. Pick out some fixed object ahead such as a signpost, and count the seconds it takes you to get there. Count out loud, *one-thousand-and-one, one-thousand-and-two. . . .* By taking an actual measurement of your sight distance and comparing it to your speed, you can make intelligent decisions about how far you are hanging it out.

I'll offer some guidelines:

SPEED	MINIMUM SIGHT DISTANCE
40 to 50 mph	4 sec.
50 to 60 mph	5 sec.
60 to 70 mph	6 sec.
70 to 80 mph	7 sec.

Give these numbers a try, and see if you agree with the minimums. If these minimums make you a little nervous, add a second. If your reflexes are really quick and you can make consistent hard stops without flipping or high siding, shave off a second. The point is that you arrive at a method of gauging honestly how your speed stacks up to you and your bike's stopping performance. If you consistently find that you are entering blind situations at speeds too fast to stop within your minimum sight distances, the message should be obvious: get on the binders and slow down quickly whenever sight distance closes up.

Ride Your Own Ride

When you are out riding with others, it's amazingly easy to get stampeded into doing things that you wouldn't do if riding by yourself. Speed is so intertwined with self-worth and motorcycling that most of us will risk an accident rather than risk being seen as a slow (unskilled) rider. When someone zips past me and cuts in too close, my natural reaction is to crank up the gas and show them some speed (skill, bravado, daring, etc.).

One of the hazards of riding in a fast group or following a big dog rider is that we tend to fixate on catching the taillight of the bike ahead. This usually means focusing on steering and throttle, while ignoring a whole bag of other cornering tactics that maximize traction and minimize risk. It's often the second or third rider in a group who takes the soil sample attempting to stay with the leader. On more than a few occa-

sions, I've seen small groups of three to six riders pull out onto a busy highway, with the tail-end riders so fixated on catching the taillights ahead that they didn't even remember to look for approaching traffic as they roosted out of the parking lot.

When riding a twisty road with other riders, the smart tactic is to back off from the bike ahead until you can't see its taillight. Then you can ignore your position in the group and ride your own ride, choosing for yourself what line to follow, when to brake, when to roll on the gas, and what your maximum speed should be entering a blind turn. One advantage to this tactic is that you aren't challenging the guy or gal ahead to race. But you may find it amazing that you can back off 4 or 5 seconds, and arrive at the rest stop only 4 or 5 seconds behind the leader, without having to take unnecessary risks.

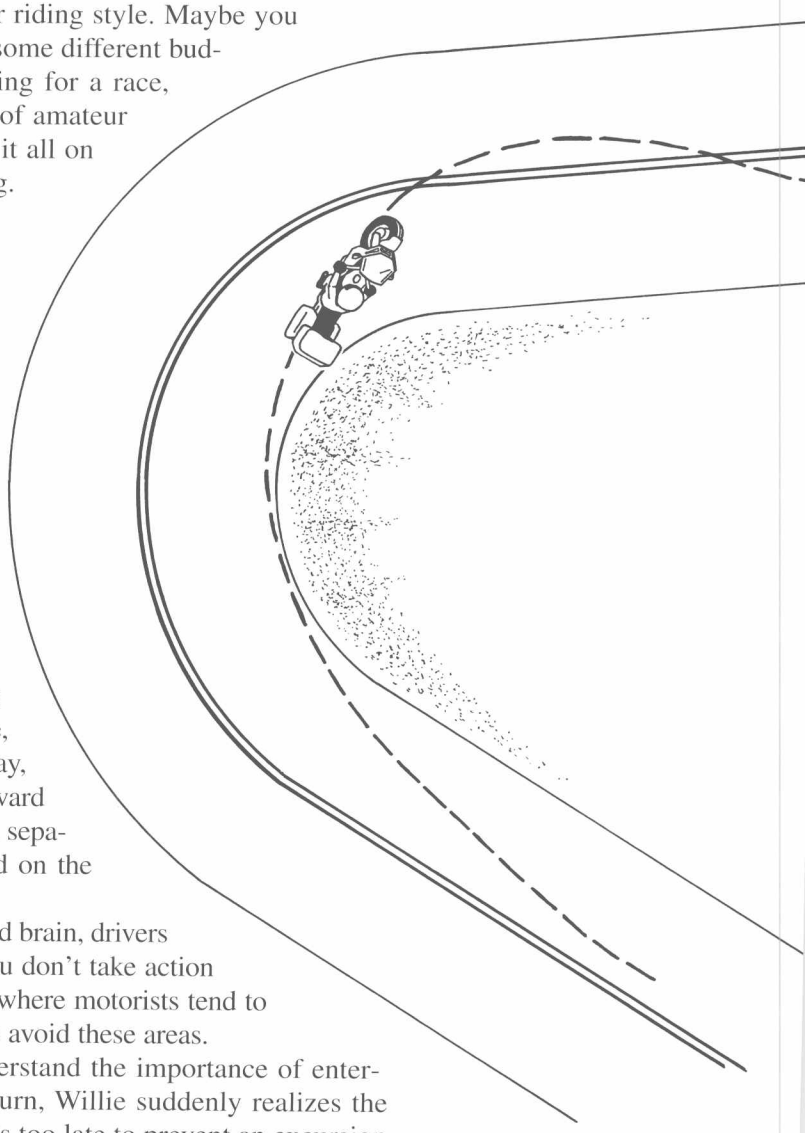
An obvious spin-off to this tactic is when you discover that the three or four people you've been riding with can't accept your riding style. Maybe you should go back to the motorcyclist store and get some different buddies. And if you're the one who is always looking for a race, that's a hint it's time to consider the advantages of amateur road racing on a closed track rather than risking it all on public roads, as Mark and his buddies were doing.

Wandering Drivers

The other day a minivan driver who had been tailgating me for several miles of double yellow finally zoomed on by, straddling the centerline. Even though my old BMW sidecar rig was maintaining 60 in a 55 zone, I think the close pass was a message, perhaps *you've been holding me up long enough,* or *motorcycles don't belong on the highway,* or maybe just *move it or lose it, biker boy.* While such aggressive actions tend to anger me, they don't scare me quite as much as do drivers who wander over the centerline or the fog line, or those who change speed for no apparent reason. I can only assume that wandering drivers don't have their brain fully engaged in Drive, or their brains are fogged with chemicals. Either way, it's a scary situation for vehicles to be hurtling toward each other at closing speeds in excess of 100 mph, separated only by a pair of 4-inch yellow lines painted on the pavement.

Whether it's an act of aggression or a disengaged brain, drivers who wander over centerlines can pick you off if you don't take action to stay out of the way. There are specific locations where motorists tend to wander out of their lane. You can adjust your line to avoid these areas.

Consider Wandering Willie, who doesn't understand the importance of entering corners from the outside. Halfway around a turn, Willie suddenly realizes the road is turning tighter than the bike, but by then it's too late to prevent an excursion into the opposing lane. Imagine yourself approaching from the opposite direction and noticing that Wandering Willie is drifting into your lane about two-thirds of the way around the corner. Now, let's convert that top view to a perspective more like you'd see approaching the same corner. Place your left index finger on the location



Crossing the centerline is usually a result of apexing too early in a blind turn. Wandering drivers are an important reason to enter turns from the outside of your lane.