

Tom Hall - 1995 Bike Trip, Vancouver, BC to San Francisco

Today is August 24th, about 2:30 in the afternoon and I'm sitting on Bodega Head overlooking Bodega Bay. I'm up at about 240' altitude with a tremendous view to the northeast, seeing the whole bay and the little town of Bodega Bay ahead of me. It is a lovely, sunny afternoon -- a little bit on the cool side; wisps of fog coming in from the sea, but not covering overhead nor further inland. The lovely, soft, tan and brown California hills spotted about with trees and a little bit of greenery up by a development more to the southeast, where apparently the irrigation is going on.

I'm going to make a long dictation giving all of the flavors that occur to me about the bicycle trip this summer and I'll divide it into several little sections: 1) The trip planning and the evolution of how our trip went; 2) then camping and what our camp arrangements set up and take down are like; and 3) an overview to a day's bike ride with comments on the kinds of scenery that we've seen and then some rather detailed comments on the art and science of biking.

Okay, first, as to the trip planning. This trip was planned for Canada to Mexico. Liz, for more than 20 years, has wanted to bike across the country and after considerable negotiation she rejected my preferred "trip / continent crossing" from West Florida to East Florida but did accept an offer of mine to drive a "sag-wagon" (ie, support vehicle) for her in the year 2000. I then made the offer of how about Canada and Mexico, figuring that was only a little more than halfway across the U.S. -- 2,500 miles rather than 4,500 -- and that there was a very nice book on the Pacific Crest bicycle trail. Well, she immediately accepted that and that was around 1992; 1993 came and went, 1994, too, and finally 1995 approached and the big, planned trip became a reality.

Our trip planning involved a curious combination. On the one hand there was lots of mental preparation for it, a little bit of physical preparation (too little on my part), and a lot of anticipation, discussion with friends, getting maps, multiple trips to REI to get equipment and so forth. And yet the reality of bicycle camping is that you just can't carry very much weight or volume, a problem that is eased by the distance you cover, 40-50 miles per day, on paved roads, which means you are never far from mini-markets. camping.

The result was that the actual packing was not very great since the space we had available was quite small. Our bikes weighed in at approximately 90 lbs all told. The bicycle itself with the pannier attachments weighed a bit over 30 pounds, the panniers another 5 pounds, and the rest was our equipment and clothes.

Well the great day came -- July 3rd. We departed for Vancouver by airplane and within two hours we were on the ground, slightly after noon. We assembled our bikes near the

immigration section, went through customs, and biked three miles to the Travelodge where we had reservations. We later returned to the airport via the hotel's van to pick up Rob Hornby, who flew in from New Jersey. Rob is Liz's 18-year-old nephew and he planned to bike with us during the first two and a half weeks down to Hood River, Oregon, before returning to N.J. to work for the summer. He assembled his bike, rode with us in the van back to the Travelodge, and there we spent the night.

The trip, as originally planned, was 2,500 miles minimum, without any side excursions, and would involve about 200,000' of altitude gain. This would mean averaging more than 3,000' a day, with relatively higher climbs in California than in Oregon and Washington. The trip would involve few or no rest days; we had a little less than 60 days available to us, so 50 times 50 is 2,500 and it would involve little time for museums, side trips, other excursions, reading, writing, or other side-activities.

For several reasons I got off to a difficult start. The first day we pedaled over 60 miles and took several wrong turns, adding miles to the trip. The second day was also long and the third and fourth days required a lot of climbing. The fourth day was our record climb, over 4,900' as we crossed Washington and Rainy Passes in the North Cascades. My bicycle saddle had a special soft, gelatinous interior that was designed to conform to one's backside better, but unbeknownst to me, it became gradually more and more lopsided, put strains on my hips and backside that I didn't become aware of until I finally took it off in Hood River, Oregon, more than two weeks into the trip. I had done almost no conditioning during the previous month; my left hand and forearm hurt quite a bit because of the position on the bicycle and I vainly sought a more comfortable position. My shoulders ached; my upper thighs and hips ached from all of the climbing and the long hours of cycling. Bicycling a heavy bicycle, if you haven't done it before or haven't done it recently, is quite an experience. And of course, coming out of Vancouver, we were half a day in heavy traffic and with some really pretty hairy bridges to cross.

Well, to make a long, painful story short -- during the first four days I increasingly became aware that I was not really of a mind to do the full trip to Tijuana, Mexico. And as I became aware of it in my own mind, I then suffered much anxiety over how to broach this to Liz. This was her long-planned vacation and she was really counting on it, and for me to check out was not good at all. Increasingly I found myself grumping and grumbling at our rest stops, looking always on the negative side and being very unhappy at the heavy auto and truck traffic that whizzed past us on the climbs.

Well, finally, I guess on a long climb, I told Liz that I was up for cycling to Hood River but after that, no more. From Hood River on I would help her with anything she wanted to do (except bicycle). I would drive sagwagon for her down the Pacific Crest bike trail if she wished or down the coastal trail if she wished, or would disappear if she wanted to do it alone or tag on with some other people that were doing it. I would try to accommodate her in any way possible but

was not prepared to do the full trip myself. My declaration took an immense load off my shoulders, having worried for four days about how to tell Liz of my increasing disenchantment with bike touring, but now the load was on Liz's shoulders. She, much more than I, is a person who once she commits herself to go from here to there, will make the trip, no matter what. If I find that "pain" exceeds "pleasure," I'll change my destination, but she, faced with the same situation, is all the more determined to reach the specified objective.

So, Liz struggled with my statement of intention for a couple of weeks. At first she was very unhappy about it but soldiered on in reasonable spirits. I, too, soldiered on and gradually I got into better shape, the hills after Day Four were not as extreme, our daily distances were less, and the scenery became more compelling. So I was beginning to have more fun and certainly not suffer so much, though it didn't resolve my bike seat problem until Hood River. Liz was just trying to debate just what did she want to do. One of the other alternatives I offered to her, my first choice, would have been to take our car, put the bikes on back, drive to an interesting park area and park the car and leave it there for a while and then bike around in a loop for a week or so. We could then repeat the process, thus taking in the best biking areas in the western states. I didn't mind bicycle camping and was sure that I would be getting in better condition as time went on, but I just didn't like the long periods in between the best locations or the lack of time to explore interesting sights. Also I was becoming acutely aware that our days were very tightly structured: awake at 6am; 2+ to break camp; on the bikes until close to 5pm; 2+ hours to set up camp and eat supper, a half hour to read and then sack time. Part of the day we would be in mini-marts, part of the time taking water breaks, much of the time chugging up hills (about 55% of the time was hill-climbing, about 10% going down hill, and the rest on the level), and occasionally we could enjoy the scenery. We could not, of course, talk with each other while we were on the bikes and when we were in the mini-marts we just talked with the gas station and the mini-mart personnel, and that was not any real interaction. So, the day was really an awful lot of work with not much in the way of interaction and not much in the way of sightseeing except as we went along on the bicycle. And to aggravate the sight-seeing, I found that when on the bicycle I had to spend 80% of my attention on the road right in front of me looking for rocks, nails, glass, cracks and soft shoulders. My eyes would be fixed to between 10, 50, or 100 feet ahead, depending on whether I was going uphill, on the level, or downhill. That left about 20% of my attention for the scenery and much of the scenery time was simply in the water breaks where you were panting and climbing up the hills in the heat. In an automobile, even when driving, I don't have to spend more than 20% of my efforts on the driving, leaving the rest for conversation, listening to a tape or radio, or looking at the scenery. Moreover, I don't have to be worried about all the auto and truck traffic passing close by at 4-10 times my bicycle speed. As a result of these considerations, the pleasure/pain balance was not good for me.

I won't go into a description of Washington except to say that it was really very lovely countryside and we had a lot of fun going through the state with Rob. Once we were within a couple of Hood River (on the Oregon side of the Columbia River) Liz, after having agonized over what she wanted to do with the rest of the summer, finally put the weight of decision back in

my lap. During the previous days I had made my plans: fly from Portland to San Francisco; get our car along with Truman's biography on tapes; listen to the tapes during the 10-15 hours of driving back to Hood River; and serve as Liz's "sagwagon" for the rest of her trip. Her counter-proposition was: if I would continue bicycle touring and camping with her for the full two months, she would cancel Mexico as a final destination and would plan to take relaxing layover days as desired. Moreover, once we were in Southern Oregon we could decide then whether to continue via the mountain route and the Pacific Crest Bicycle Trail, or go over to the Coast. By that time she was also coming to the conclusion that, much as she would have like to make it to Mexico, she was not having as much time to do the reading, writing, and thinking that she had so much looked for in this two-month holiday. So, the ball was back in my camp. We at last reached at the Wades on July 18th for a three-day stay in Hood River. On the 19th we took Rob down to the Portland airport and spent the 20th relaxing about town. By now I had decided to go on with her on the new plan and though still somewhat tentative, said I would continue on and see how it went. So that is what we did and now we are almost all the way to San Francisco. We will have completed about 1,700 miles all told, have been out just under two months and, I must confess, we've really had a great time! Our revised schedule has really worked out very well for both of us.

I conclude this little section by saying that, at one point early, just before we got to the town of Hood River, Liz said that by this point we had passed the testosterone test. And indeed we had. We were following our planned schedule, and even during the initial mountain segment, without any conditioning on my part and with Liz' relative lack of conditioning, we were doing the mileage that would have been necessary to make it all the way to Mexico in the time available. It had become evident, however, that if we persisted in our original plan we would have flunked the intelligence test. We would have achieved a self-imposed target which would have been meaningful only to us -- the question of touching the Mexican border -- but would have missed out on a lot of the person-time, scenery-time, museums, side trips, layover days, rest, reading-time, and other good things that make a vacation worthwhile. And so I end this section on the overall trip planning, except with one final observation: Both Liz and I are very pleased with how we managed to negotiate this change in plan and how we both worked out an alternative destination. Liz, of course, was very disappointed when I first told her about my reluctance to continue beyond Hood River per the original plan; but she respected my willingness to share my views with her honestly. She acknowledged that it was certainly much better to have me voice my concerns early along with my willingness to accommodate her in any other way possible, so that she wouldn't lose her total bike holiday, than to have grumped and moaned and groaned through the rest of the trip, and thus diminished her enjoyment of our expedition.

Now, on to getting up in the morning and breaking camp. We would typically arise at 6:00, most of the time waking naturally during July when the days were still very long. Later on in August we would set my little wrist alarm for 6:00 and, by the time we were fully experienced at breaking camp, we'd be off by 7:30. If we had a long, hot climb ahead of us we would get up

at 5:45 and be off as early as 7:15. So an hour and a half to break camp and probably only half an hour of that time were we doing duties that we would not have had at home such as folding up the tent and packing the panniers. We would generally pack our personal items first and then our communal items, each of us having a very specific role. We hardly had to say anything to each other during this time. Liz would get up first, go off to the john and then, before she went, she'd light the stove under a pot of water. I would dress myself and pack up things inside the tent. By the time Liz was back the hot water would be boiling and we would make our breakfast. The breakfast was a one-bowl affair with quick Quaker Oats; for me some powdered milk, some All-Bran, raisins, dried apricots or perhaps other fruit, and for both of us -- hot chocolate. Liz would have milk and oatmeal with some of her dry cereal on top. All we'd do is pour hot water in, mix it up, and eat the resulting cereal or hot chocolate mush. The dishes would be washed in the remnant hot water. With only six items -- two spoons, two cups and two bowls -- it was a very easy proposition. We didn't require any soap and didn't have to rinse. We would then dry them off and go on with the rest of our packing. The tent would be folded quickly and I'd pack that; Liz would make the Gatorade mix for the day. We usually bought the powder and then she would fill up our two Gatorade bottles and we'd both make a last trip to the head after having packed our panniers. Then, off we would go. The morning routine was thus quite easy, expeditious, and often done in while it was still very chilly. A good part of the Oregon and Washington time we were at some altitude and by the time we got down on the California Coast it was later in the summer and the cold ocean kept the air temperature quite cool. Some mornings we even had a very chilly fog. Accordingly, we usually were dressed quite warmly in the morning, often with full length leg tykes.

Now to the next section, an overview to a typical day's ride (40+ miles). Our goal was to get at least 60%, sometimes 70% of the biking done in the morning before lunch. Often lunch would be delayed until at least 12:30 and not infrequently 1:30 in order to get the requisite pedaling done. By afternoon the heat and increasing fatigue would slow us down, especially if there were significant hills in the afternoon; hence our preference for the mornings. Also, the traffic would tend to pick up by midday and the afternoon. Ideally we would have our major climbs early in the morning, as was the case on a fair number of days. A typical one was out of Bend, Oregon, where we had a 3,000' climb at Mt. Bachelor first thing in the morning, with cool temperatures and light traffic. We would typically wear our yellow League of American Wheelman jerseys. They were very good ones in all respects and highly visible because of their bright yellow color with reflective stripes. On top of the jersey I would wear my blue polartec and on top of that, the bright yellow windbreaker vest that Liz made for me. On we would pedal, usually racking off the miles pretty well -- after 15-20 miles we would stop and have some crackers or cookies, followed by another 5-10 to get up to 25+ miles before stopping for lunch.

Mid-morning we would stop at a mini-mart and pick up any extra things we needed for lunch such as several soft drinks, our preference being the Snapples. If we anticipated not passing a

grocery before the evening we would also get food for dinner, or preferably, we would delay our stop until the afternoon to minimize the extra amount of weight.

Our lunch would typically include crackers or, occasionally, bread, topped with some deviled ham or chicken. We would often have a small bag of Doritos or other munchies, perhaps some fly specs and fruit bars and, of course, our soft drinks. We would try to lunch beside a stream or with an overlook, preferably in the shade because it would get quite hot during midday.

We would stop every 3-5 miles of travel (every 20-30 minutes) when the going was reasonably easy, or whenever there was an interesting sight to see. We stopped at most historical markers, visitor centers and parks. We stopped more frequently, perhaps every 1-2 miles, when we were going up the hills, or even more often when we were on a very steep pitch. At each stop we would nurse our water bottles, consistently finishing during the day at least one 24-ounce bottle of Gatorade, another one of water, and 1-2 commercial drinks. The basic rule in long-distance bicycling is drink when you are thirsty, drink when you are not thirsty, and also drink in-between the first two occasions.

Whenever we would stop there always was a premium on finding a good guard rail to lean our bikes against. The 90 lb. bikes with full panniers were always difficult to position so they didn't fall over. If not just right, the front tire would immediately turn at right angles and then the bike would slide back and fall over. There was also the risk of leaning the panniers against something sharp which could puncture them. If they were at too flat an angle there was too much weight on the upper part of the bike and it was prone to fall, and if it was almost vertical there was always the risk that some little nudge or wind breeze would knock it over. Fortunately we didn't have any major problems, in part because the guard rails were so accommodating.

We usually climbed between 1000 and 1200 feet an hour when we had a long, steep hill which, with a 90 lb. bike, is a pretty good rate. Our speed up hill averaged 6 to 7 miles per hour, 12 to 15 miles an hour on the level, and 20+ up to 38 mph down hills. The wind makes an enormous difference in biking and could increase or decrease our average speed by 2-4 mph.

We drank gallons and gallons of Gatorade during the summer and ate lots of snacks. Only near the end of our trip did we become a bit more conscious of the calories, fats and other bad things we consumed. Given our energy output we hardly bothered worrying about all the cookies, crackers, jam-stuffed cookies and peanuts we consumed. Despite a not very illustrious diet we never seemed to get into trouble because of the enormous number of calories we were burning and indeed we both lost 15 pounds over the summer. Anxious to keep those pounds off we wanted to avoid maintaining our bad dietary habits once we got home.

Almost every day, especially after Rob left us, we would have a meditation. We would pick a particularly lovely spot, an overlook, a wildflower field or perhaps a river bank, and then Liz and I would sit down in comfortable spots -- not necessarily next to each other -- and I would set my

little timer on my stop watch. We would remain silent for 15 minutes, or if the spot was especially good, up to 20 minutes, just meditating and enjoying the scenery that we were looking at, with the wonders of nature all around us.

Now for bit about the different kinds of places that we went through and scenery that was of interest. In Washington State we crossed between the two halves of the North Cascades National Park. Though the scenery was great we were out of sight of the most extraordinary parts of the park. Down on the eastern backside of the Cascades we followed rivers, twisting down through Winthrop, and eventually we reached the Columbia, Yakima and Wenatchee Rivers. The Columbia is, of course, huge, and the other two were very big rivers. With roads beside the rivers we gradually went down hill though with lots of ups and downs along the way. The scenery was lovely, the Columbia River Valley became deeper and deeper until the sides were upwards of 2,000' above us. The moment we passed to the east of the Cascades the scenery dried out very much, but irrigation was highly prevalent so that there were lots of orchards and other cultivations. We had one of our most exciting moments about ten miles north of Wenatchee when we were caught by a truly heroic-sized thunderstorm. We could see it coming, initially admiring it from a distance until we suddenly realized we had better tend to our own safety as it spread overhead. We were next to an orchard with medium-sized trees loaded with young apples the size of large cherries. We leaned our bikes against the trees, immediately broke out the tarp and huddled underneath. The rain came at us horizontally in sheets and our visibility was near zero. Hailstones the size of peas come down all around us. With the tarp flapping tremendously Liz went out from its scant protection, got her camera out of the pannier and managed to take a couple of pictures as well as rescue Rob's helmet which was rolling down the hill into the orchard. The storm was over almost as soon as it came; the hail was all around us, the road sopping wet, and the cars were stopped during the immediate passage of the storm. We learned later that the storm had tremendous dimensions and was something very unusual for the area. In one location they reportedly had hailstones the size of softballs that had demolished the windshields of all the cars parked out on the street in the locality where it struck. Apparently it made the local papers and was really quite some news.

After leaving Wenatchee we climbed up a valley and crossed over Bluett Pass. We almost went as far as Leavenworth, Washington, and did go into Cashmere. From there on we were up in the mountains for the rest of Washington. We came down the south side of pass near the back of Mt. Rainier, which was regrettably in the clouds, and then climbed a couple of absolutely gorgeous passes. We often were on long climbs, traversing the sides of valleys with deep ravines on one side and steep hills on the other, and forests all around. We would have either artificial or natural lakes on one side or the other and, on a number of occasions, came across construction crews where there would be a flagman controlling one-way traffic; the stop, construction activity, and slow moving cars were always provided a nice respite. We'd generally stop, chat with the people in the waiting cars and the flagman, and then we would bring up the tail end of one-way route of cars.

We generally camped in public, state or federal, campgrounds. We made rare use of commercial campgrounds and during our entire trip stayed in only four motels and one house -- one night in the Vancouver Travelodge, one in Twist after descending in the rain from Washington Pass after a very long day of climbing and distance, three nights with the Wades in Hood River, a night in Grant's Pass after we came down from Crater Lake following a night in the rain and with a freeze, and then a final night in Eureka as August 15 (one day late) birthday present from Liz. The parks were, by-and-large, excellent. We very much enjoyed them, they usually had lovely locations, and we were never turned away although many were full. Once we reached southern Oregon and California we encountered hiker-biker arrangements, a section of the park with two or three picnic table spread around and open space was available for campers. Hiker-bikers could arrive with no prior reservations required and capacity was essentially unlimited. It was always reassuring to have that kind of availability rather than the situation faced by car and RV campers in which many of the campgrounds were posted "full". Although there would often be quite a few empty spots, they had been reserved by phone and would be filled by later in the evening. Some of our campgrounds were truly magnificent, including the lake near Mt. Adams, Devil's Lake and several other locations on the Cascade Loop south of Mt. Bachelor, Diamond Lake, and some of the redwood and coastal parks. We made good use in the National Parks of my golden passport card which is available to people 62 and older and gives them a half rate on the campsites. The cost was never a factor, however; even the full rate would be \$10 - \$14 for a full site and for bikers it was usually less than that. At the hiker-biker sites it was \$2.00 or \$3.00 per person -- a very nominal charge for the excellent facilities.

Most of the time we had access to water -- piped, potable water. A few times we had to bring in our own water or use the disinfectant pills, but they were very much the exception. Probably only a fifth of the campsites had showers and we made use of the available showers only about half the time, instead preferring a sponge bath or just a wash cloth bath. In our daily biking it was a hopeless job to do much in the way of showers because the next day you were bound to be sweaty and grimy once again. Our clothes always ended the day sweaty and often covered with dust; we couldn't do a big washing in the evening and expect them to be dry the next day. When biking up hill we would sweat a lot, aided little by the slow pace, but the moment we started down or even went on the level, the evaporation would be high, the cooling power great, and the sweat would disappear.

One of our constant challenges -- a rather fun one -- was when we were in the mountains and wrestling with the chipmunks. The chipmunks were very familiar with campers and on our arrival, would immediately come to our picnic table. They would look very cute, twitch their tail, and parade up and down. At Crescent Lake, Oregon, one chipmunk climbed up Liz's back twice to get her attention and entice her to provide food. Sadly, for the chipmunks, we were very careful not to give them any food. Eventually they would tire and leave but even so we had to suspend our food between trees in bags so they wouldn't be able to get it. In one place a chipmunk partly chewed off the label on Liz's pannier in an attempt to get inside. In another

case it was a raccoon that tried to get in and did a little chewing on Liz's pannier. I carried all the breakfast food; Liz carried lunch and dinner. Probably if our bikes had been weighed, Liz's would come out with a bit more. She was always first to volunteer to take all the heavy items, although as the summer wore and my muscles built up I became more ready and willing to take everything that came my way.

Once we reached the coast the scenery changed dramatically. Riding south, the water was always on to our right. We would periodically go inland for a ways, including a longish segment of route 101 before it joined up with Route 1 near Leggett, California. The famed California Coast lived up to reputation. The tall rocky hillocks that pop out of the ocean, high cliffs, long wave trains rolling in, wheeling birds, seals out on rocks, little sandpipers and other shore birds searching for the little beasties that come in on the waves -- all of these sights and more were very much in evidence. Once we got to Route 1 we were much closer to the coast. Aided by the predominant northwest winds we could zip along at 16 to 20 mph with hardly any effort, especially in the afternoon when the wind came up. The only problem we faced on the coast was the intermittent streams coming down from the mountains. The streams would descend at a steep angle, the road would drop sharply, cross the often dry stream (late summer) near sea level, and the rise again on the south side; the drop and subsequent rise ranged from 100 to more than 500 feet, in a few cases. Thus we would be tooling along, say at 150, 200 feet high, with lovely views to the west and the road stretching on at similar altitude in the distance, and then we'd come to an abrupt yellow sign pointing to the left and we would know we were in for a dippy-do. Down we would go, fast but not too fast because the road would twist, be narrow, without shoulders turns, so we would keep ourselves in check going down. We would hit the bottom at maybe 20 or 18 miles an hour, hardly any real help with the steep hill ahead that required our lowest gear to reach the top. When we were on sections of road that had many streams it would get rather tiresome, though scenic.

Now for a section on the art and science of bicycle touring -- some of the mechanical and physical aspects of going with a heavy bike: As I mentioned, our bikes probably weighed around 90 lbs with maybe 60% or more of the weight on the back wheel. We each had four panniers and a handlebar bag; the larger one handlebar bag kept my camera and wallet. Liz had a smaller one which contained a camera and maps. We each had across the top of our rear wheel, above the panniers, our sleeping roll, which included a large, waterproof, cylindrical yellow bag. Inside the bag was our sleeping Thermarest mattress with the air squeezed out of it, our sleeping bag, and in my case, the tent. On our handlebars we had our bicycle computers. Liz's computer was stolen at Devil's Lake, just south of Bachelor, and she didn't replace it thereafter. We each had toe clips rather than clip-ons because the clip-ons would have required special attachments on the bottom of our bicycle shoes, attachments that would have been very cumbersome and inappropriate for walking, especially hiking. We had 35 millimeter Avocet tires, which is almost as wide as our road bikes would accommodate. Mine came with 28mm wide tires but I changed them for the 35s; the maximum that can fit 38mm. We wanted the wider tire since it is better for load carrying, had a wider tread that was better on

occasional gravel, and with more rubber on it, would wear a bit longer. The tires served us well. Liz had one flat caused by a small nail near Yakima and then had to repair it again since the patch didn't hold. It was one of these new, instant patches. As of Bodega I have not had a flat but I did have to change my rear tire in Leggett because my rear wheel gave out with cracks and also because the tread was almost gone. We each carried a new 35mm Avocet tire, three inner tubes between us, and near duplicate sets of tire tools. We also carried several specialized tools for special purposes.

On typical days we would go from 35 to 55 miles, averaging 41 over the full 1725 miles covered in the trip [post-Bodega Bay estimates]. We typically arrive at our campsite between 3:30 and 6:00 PM. We gained an average of 2000+ feet daily, with the peak day being 4900 over Rainy and Washington passes in the Cascades. Our daily average speed for the trip was about 12 mph, though that went as low as 7 mph during a day with lots of climbing, and up to 14 mph when there was a following wind or lots of downhill. Our maximum speed for the trip was 38.5 mph. Our typical speed on the level was 14-16 mph but the daily average was lower because we spent lots more time going uphill (about 55% of the time), and often stopped to see the sights, visit a minimart, or tour a museum. During these activities we would be travelling at slow speed and would thus lower our total average.

I keep a fairly constant pedaling cadence and the times I checked it out, it was about 70 revolutions per minute. Competitive racers average between 90 and 100, much too tiring for me. We have 21 gears, three forward chain rings and seven sprockets on the back wheel so $3 \times 7 = 21$. In my case, I got a special adapter for the smallest chain ring, the one that's used for the lowest gear; this makes my lowest gears 10-12% lower than on Liz's bike. Of the 21 gears, we use only 10 or 12 of them with any frequency. We try to not cross our gears, meaning use the large chain ring and the large sprocket or the small chain ring and the small sprocket. When this happens the chain has to go diagonally across from the front to the back and the chain rubs, sounds, and gets rapidly worn. The most frequent gear by far was the middle one and I tended to travel on the level either in the highest or next to highest sprocket and middle chain-ring gear. This put me comfortably in the 12 to 16 mile and hour range. Not infrequently I would use the biggest chain ring with the next to smallest sprocket, which would give me a comfortable 16-18 miles an hour. When starting to climb a big hill I would drop down to the middle sprocket and then shift to the low (or smallest) chain ring, which would put me slightly lower than what I would have with the low gear sprocket and the middle chain ring. I could go down from there if I needed to the next three lower gears, this giving me a good range for climbing steep hills. I generally got into my lowest gear on hills that were 6% to 7% or more.

With time both of us became very skilled estimating in advance what gear we would require to go up a hill and I tended to shift either a chain ring, if I wanted to make a substantial change, or jump two or even three sprockets if I was in the proper chain ring and I had to gear down or gear up. Fine tuning might be done with just a single change occasionally, but usually if it was worth changing, it was worth changing at least two sprockets. It is very important to shift significantly in advance of needing to, and to try shifting without being under full pressure of

your feet. If you're under full pressure there's always the risk of breaking a gear tooth or perhaps a chain, or in any event of increased wear because of the pressure you're applying at the same time that you're changing the gear.

Of the parts of the bicycle that were especially valuable over time, one was the rear-view mirror. I found I soon got used to the mirror, using it all the time to be aware of when and what kind of traffic was behind me -- whether it was a great big truck, a wide trailer, a RV type of vehicle, or just a regular car. I could also keep track of Liz when I was ahead of her and she to keep track of me when I was behind. When the two of us were traveling alone we would monitor each other's progress and if the gap got too wide, the lead person would stop. If you are making a left-hand turn it was easy at the start of the turn to get a good view of the traffic behind you. It was more difficult if you were going on a right-hand turn because the mirrors were on the left side.

The shoulders of a road are of enormous interest and importance to a bicyclist. They vary all the way from no shoulder or even less than zero, to a full, eight-foot wide shoulder that is a delight to travel on. The quality of the shoulder also varied enormously, ranging from shoulders that were filled with loose gravel, broken bottles, stones, pebbles and other obstacles to the point that you were loath to ride on the shoulder unless you really had to, to shoulders that were so glassy smooth that you would just hear the hum of the tread of the tires on the asphalt. Many of the shoulders are nominal shoulders, of gravel, and immediately to the right of the often present white line marking the side of the road the shoulder would drop off into soft sand or rocks. Many times there would be a two to three inch near vertical drop from the repeated layers of asphalt that had been put on the road over the years. Some shoulders were dramatic, as in the national parks. At Crater Lake the drop-off ranged from 100 to 150 feet, descending at a 70° angle. If you fell off the shoulder you were down the hill with no stopping. These kinds of shoulders required you to stay a foot or even 18 inches in to the left of the side white line which, of course, reduced correspondingly the room that traffic had to pass.

The road surface on the shoulders was so variable that not infrequently, I would find myself with a nominally good, wide shoulder of asphalt to the right of the white line, but unable to use it except in emergency situations, simply because it was so filled with glass, bumps, potholes or whatever.

Hills, curves and especially bridges often had narrow shoulders. The best you could do was to go down the white line or slightly inside of the white line, making sure that you had enough room for your panniers. Because the front panniers were low, if you got too close to the edge of the bridge you were in danger of catching your right, front pannier on the bridge rail. This would, of course, immediately jam your bike, cause a loss of steering ability, and the front tire would turn towards the edge. The hills often had very meager shoulders, probably because they were usually in difficult terrain where it is more costly and difficult to provide an adequate shoulder. Those areas were, however, the ones where you were going very slow uphill, and

hence had limited stability, much less than when travelling at regular road speed. With slow speed the turns of the front tire tended to be exaggerated and the bike wobbles along its course. Conversely, when zipping downhill at 20-30 miles an hour, the cars really have to go fast to pass you and, if they are on a hill or a curve, it makes experience all the more dramatic.

Two comments on the traffic: we were passed by many, many thousands of vehicles during the summer and that was our main risk -- being done in by a vehicle coming from behind us. There is no way that you can monitor every vehicle in your rear view mirror and it would be very distracting, and unnerving, to try to do it. Moreover if a vehicle wants to go too close to you or run you over there was just no way you can get out of the way in time even if you have been tracking it in the mirror. The relative speeds between our average of 12 miles and vehicles travelling at 50-60 miles an hour are so great that in no time the vehicle will do you in. So we develop a certain amount of fatalism as we go along on the bicycle, realizing that all we can do is try to be as visible, steady and predictable as possible, to not weave around, and to leave a minimum of six inches of shoulder to the right side and preferably a 1-1.5 feet if available. If we see that the traffic behind us is going to come up and pass at the same time when traffic is coming the opposite direction we know that the passing car will have to thread between us and the oncoming car, and hence edge a bit more to the right than usual. Of course if we are to the right of the white line we feel pretty comfortable about it and just let the cars take care of themselves. And if there is no asphalt to the right of the white line then it's a matter of balancing the two. Perhaps some ten times during the summer, when I recognized the traffic situation was just not good, especially with a great big 18-wheeler truck, I would just pull off to the side, stop and let them pass.

The quality of the driving probably was best with the truckers, particularly the 18-wheelers, and worst with the RV drivers. A close runner-up to the RVs were the pickups; empty pickup drivers tended to be male, often young and they drove very fast. They gave no evidence of moving over -- many gave no evidence of moving over towards the center of the road even when there was no oncoming traffic, and they just zipped by you. That, plus many of these pickups were four-wheel drive and they had big, off-road tires that a hum or roar that came close to the level produced by a large truck. A few of the very large trucks seemed to come deliberately close and maybe once a day we would have a truck that seemed to be only 1-2 feet away. The first part of the truck would give you a blast away from the truck with the bow wave of air, followed by a suction which would pull you toward the truck. Not infrequently we encountered tandem trailers, more than 50 feet long. You would see the first set of wheels go by, breathe a momentary sigh of relief, and then the second set of wheels of the second trailer would come by and you'd realize that you weren't out of it yet.

Another hazard is the tendency to assume that only one vehicle is passing you. You look in the mirror, you see a car, you say, "Aha, that's fine," you prepare psychologically for it, and the car goes by with all the attendant noise. At this point you relax for a moment only to realize that the car was followed by two, three, four, or sometimes a train of eight or ten cars and trucks --

the latter ones all masked by the first one. Much of the "masking" is due to the noise. Road noise is a key warning system, almost as important as sight. Your ears are extremely important in bicycle riding and there is many a time when you're tooling along in quiet areas and you just don't worry until you hear something. You can usually hear the trucks and cars quite a distance off and then check in your mirror and look ahead and there it is! Once the road reverts to silence you can be a little more generous with the amount of road used, with the occasional exception where a Honda Goldwing motorcycle comes along. They have only two wheels and they are very well muffled, making much less noise than a car. Occasionally I've been surprised but never endangered by one of them coming by and catching me by surprise.

The RV people, particularly those towing trailers, are the most hazardous. Many are not particularly skilled drivers, they are often older drivers with less acute skills and less awareness of the limitations of bicycles, especially heavily-loaded bicycles. They often seem unaware where the right side of their vehicle is and that the rear-view mirror sticks out beyond the right side of the vehicle. I have not been aware of being almost clipped by a rear-view mirror, but sometimes when I look ahead at Liz and see the RVs pass, the rear-view mirror on the right side of the vehicle is not all that far away. The cars towing trailers have another problem; the driver is driving a car or pickup and they know where the right side of the towing vehicle is, but the trailer sticks out an extra foot or more and hence another chance for misjudgment. When you look at another bicyclist and see the vehicles pass, it really seems a miracle that we survive at all, but the great majority of us do and, as I said, you really have to develop a sense of fatalism on this kind of tour because if you get spooked with every vehicle, you won't enjoy the road and you won't do very much in the way of bicycling.

One of the thoughts that comes to me in all of this is that for almost the entire trip of over 1700 miles we have had to steer a path that is within six inches of the right shoulder line -- 3-4 inches to either side of it. Steering is very precise; once you get skilled, even with a heavy bicycle, you can maintain this line nicely and, at times, when I've had a shoulder to my right, I would see how long I could go directly on top of the white line. With a line that is about 4 inches wide I can stay within a few inches of either side of that line for quite a long time with no problem at all and it is even easier when going at some speed. When going slowly it's more difficult but if you work at it you can stay very close to the line. When I hear traffic I work very hard at keeping a constant relation to the line and I manage to keep my track very well.

Just as I became reflective about how much tougher the job is for the cyclist as compared with the motorists, I realized that the latter also have to steer a fine line. The penalty for them is also very severe -- a collision in passing or with an oncoming vehicle. The difference is that the bicycle steering is a lot more twitchy than is the case with the auto. Auto steering is much more gradual and the steering wheel needs only small adjustment; that plus the sense in the automobile that you're much less vulnerable. In the bicycle, if anything hits you -- a truck or a car -- you're history, or very nearly so. The speed differentials, weight differentials and hardness differentials are just too great. In an automobile you may shed fenders, bumpers and things like

that up to moderate speeds and get out of it quite well, plus you have the steel cage around you and, of course, the seat belts and increasingly, air bags.

One other lugubrious thought. In an auto if a choice has to be made between hitting an oncoming car and a bicycle, most everyone will take on the bicycle or the motorcycle rather than hit the oncoming car. So you're at the bottom of the food, or in this case, the hitting chain.

All these morbid thoughts aside, it is striking to me that even with the many thousands of cars that have passed us, we have really had very few moments in which we were nervous or scared, and so far, no significant close calls. Probably the scariest time was actually crossing the Hood River Bridge over the Columbia River. The bridge is about a quarter of a mile long, a significant distance, essentially level, 75 to 100 feet high over the river, and it is entirely metal grill. The metal grill leaves two inch square holes so I can see right down to the river. The hazard is that my bike will slip. There is no shoulder or walkway so I have to cross in the traffic lane. It is an old bridge with limited width travel lanes. My memory of the crossing is one of near total panic, total concentration on steering, and being delighted that there was not that much traffic at the time that I crossed. I was especially nervous at the interdigitating expansion joints encountered every hundred feet or so. The image of getting my front tire dropping into a joint and getting wedged, all while travelling at speed, and then doing an end for end flip, was most unsettling.

At times, when chugging up long hills, I reflected on various matters of the mechanics and physiology of bicycling. On one very long hill I remember wondering for the nth time how much foot pressure I put on my pedal to move myself along. I churned out the calculations. My bicycle and I weighed about 280 lbs. and I then estimated the number of pedal revolutions to cover a given distance and elevation. This resulted in an estimate of four pedal revolutions to raise my 280 lb. load one foot. Thus, 280-foot pounds and 4 pedal revolutions divided by 4 meant that I was pushing about 70 lbs. per revolution to raise myself up the three inches, or four times three inches equals one foot. I made similar calculations for travel in other gears and different gradients. In the highest gear I can cover a substantial distance with few pedal revolutions, while in the lowest gear I am really cranking quickly just go three to three and a half miles an hour. My cadence of about 70 will send me along at only about this speed in my lowest gear.

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One final observation on hill climbing -- and indeed on much bicycling: I find myself humming, but not with any audible sound; no one next to me could hear me. It is a humming I can only hear within my head. I have about 15 different tunes that I cycle through at various times and they are all ones where I can adjust the beat of the tune to my breathing, or occasionally to my cadence. For example, I'll go through various hymns like "Turn Back, Oh Man," "A Mighty Fortress is Our God," the Thanksgiving "We Gather Together," or I may do the military service ones like "Anchors Aweigh," or the Air Force's, "Wild Blue Yonder," or "The Caissons Go Marching On," or the "Halls of Tripoli." And then I'll get into ones, the oldie English ballads

like "The Ash Grove," and songs like that from early days when I was in the Madrigals at high school. Another favorite is "Moscow Nights." In each of these I'll hum at double, triple, quadruple time -- whatever's necessary -- so that the music's beat corresponds to my respirations as I'm going up the hill or even on the level.

Well, this is enough musing on the art and science of biking. Now for a final section on camp at night. I've already commented that we almost invariably would stay in public campgrounds and the virtues of the hiker-biker location. When we get into a campground we make a first assessment as to whether it is crowded (the usual situation) or not. If not crowded Liz and I will cruise around together and pick out our camping spot. Alternatively, if crowded, one of us will stop at and hold the first good location while the other goes on to see if there is a better one. If the first one is best the second person returns, and if there is no return after a reasonable pause, the first one goes and looks for the second. All of this routine is because occupation is possession and with a self-pay system, we have to "possess" the location while the other of us goes to the entrance, fills out the envelope, inserts the money, and deposits it in the metal box. When the ranger takes the money and site request we would often find that the site was already reserved by phone and unavailable. Occasionally the ranger could tell us at the start which sites were still available and we would then check them out and make our selection. And thank heavens for the hiker-biker sites in the coastal campgrounds that were so heavily used. Many campgrounds had a camp host who live in their own RV for the summer, and who sell campfire wood for \$4-5 dollars. In these situations the camp host comes around to collect our fee towards the end of the day and provide us with local information.

Our first actions are to set up the tent, put our clothes, sleeping bags, air mattress and other things inside the tent, pull out the food and cooking gear and set it out on the campground table. I would always hang out a line for drying clothes, wash cloths, towels, bathing suits, or whatever, and then we'd do a little exploring if there was enough time. We cooked our dinner on a small Whisper-light gasoline stove, which worked very well during the summer and was an economical and efficient way of cooking. We would have one, or occasionally a two-pot meal. Not infrequently, particularly towards the end of the trip, Liz and I would have a bottle of wine between us and we'd have some munchies. After the cleanup we would walk around the campground, do some reading, and early bed. Once in our tent we would put on our REI head lamps for 15-20 minutes of reading before heading off to dreamland. Usually Liz would fade out around 9:30 and I would drop off 10+ minutes later and that was our night. Each of us -- more often I -- would get up perhaps once in the night and from time to time we would stick our head out, particularly when the moon was not out, to look at the stars. We would open the mosquito netting and in the absence of light pollution or a huge canopy of redwoods, the heavens would be magnificent.

Now for a concluding, reflective section on what the summer has meant to me: First, I think it's been a very important time for Liz and I to be together for an extended period of time. We haven't made this sort of a trip since our trip more than 10 years ago to New Zealand. It

provided us with a great opportunity to sort things out every day, to work out where we were to, what we were to do, and when we were to stop. It has just been wonderful. And we've had an opportunity, particularly initiated by my decision to not go all the way to Mexico, to sort out what travel and what trips really mean to each of us, and how we work out compromises so that neither of us feels that we have been done in or lost out, to have worked out a plan that is acceptable to both.

Second, it's been a chance for both of us to develop our muscles more than we have ever done before. We've checked our resting pulse -- they've come down to 60 and below, and certainly our stamina to go up extended hills and carry a big loads has increased very much. The big challenge before us on our return is to keep ourselves in some degree of fitness. Here I am 64 years old and I'm in probably better physical shape than I've ever been in my life, even as a young man.

Third, it's been a chance to see a good segment of our country in slow motion, to really gain an appreciation for many little spots and sights and situations that, in an automobile, we would whiz by and only see at a glance. It also gives us an opportunity to strike up conversations with a variety of interesting people, simply because our bikes are so conspicuous and quite unusual. We saw only five other bike tourists in both Washington and Oregon and we've seen quite a few more in California along Route 1, but probably no more than 25 or 30 in all, about half of whom are foreigners -- mainly German and some Canadians. A bike all loaded down with panniers pulling into a mini-mart, to a restaurant, to a campground, evokes comment and questions. The invariable question others have of us and we have of other bicyclists is, "Where did you start, and what is your final destination?" When we were in the hiker-biker sites with other bikers there was lots of experience sharing, and we were usually at the low end of the bicycle experience chain. We found one man that came from Delaware and a woman that came in from Virginia, went up to the Northwest and then kept going down to California. We found a German couple that were now completing two years of bicycling and done much of America and much of South America. We met a young couple that started in Alaska and were going on to San Francisco and then southeast to Florida. There are some real heavy-duty bicyclists out there and though we have had a very substantial experience ourselves by now, we are still a long way from being in their league. Our exchanges elicit comments from each side; we ask questions of them and they of us, and soon we are in a fine conversation, something that would probably not happen if we had driven into the campground in a self-contained RV.

Another observation: we have been almost completely out of contact with our work and with the larger political-social arena for two months. While we see an occasional headline, that's about it. With the exception of purchasing one Time Magazine about mid-trip, I have not followed the national or regional news at all, and after being a news junkie, this is quite a change. I haven't felt deprived; I have been deeply troubled by the turn of events in Washington and by the agenda of many in the Republican Party in Congress, but at least for two months I have been able to enjoy the splendors of my country and the wonders of the parks,

which are really one of our greatest assets in this country. I haven't had to moan and groan about the kinds of things that are being done legislatively at this time, and about all the crime and the other problems that are affecting our society so adversely. So this has been a nice break from the reality out there in the real world.

With these observations, I'll call it quits for now. had a lovely day it has been and a nice time to reflect on this marvelous trip that Liz and I have had together.