

New York Cycle Club Inc.

MONTHLY BULLETIN - APRIL 1976

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APRIL MEETING

3rd Tuesday
APRIL 20th
RINALDO'S
32 E. 32nd St.
1 Flight up
Gather at 6P.M.
Dinner at 7P.M.
Meeting - 8P.M.

Weekend Bike Trips

BIKE TRAIN

Pepsi Marathon

CENTURY

Touring

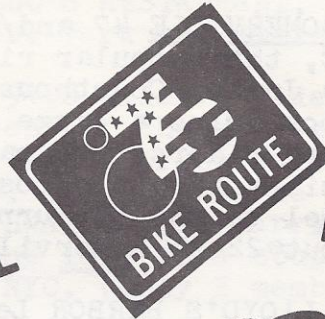


BEST BY BICYCLE



BIKECENTENNIAL

ALBANY



Bike-A-Thons
TRIPS

GEAR '76 May 29-31
Great Eastern
Rally



Syracuse, New York

TOSRV

BOSTON

GET YOUR FRAME
READY FOR SPRING
NOW!



It's
SPRING
Time **IN NY**

From the Veep's Desk

Slide show for the upcoming meeting of the New York Cycle Club on Tuesday, April 20th at Rinaldo's Restaurant. Irv Weisman's 300 mile tour through hills and farmland of Wisconsin, Minnesota and Iowa ridden last August with the Tri-State Bicycle Touring Society of La Crosse, Wisconsin.

With the advent of Spring and improving weather conditions many of us will be thinking more about getting out on our bikes. Let's get out and support our club by coming to our monthly meetings and our rides. Again I would like to remind our members to come forward with your slide shows, auctions and the like.

Remember. The next meeting will be at Rinaldo's Restaurant at 32 East 32nd Street between Park and Madison Avenues (2nd floor) Tuesday, April 20th starting at 6-PM. Let's have a good turn-out.

Transportation to GEAR '76 - Several club members have offered car lifts. Among them are Marian Adikes of Northport, L.I., Joe Messing, and Herb Schaefer of Brooklyn. Will other members who have cars and available space please contact me so that they can be listed in the next bulletin -- the last issue before the big event. Be a buddy - Give a lift.

Amtrak has train service to Syracuse. The baggage carrying train leaves at 8:30 and arrives at Syracuse at 2:10. Bring bikes in at least $\frac{1}{2}$ hour earlier or the day before. It is advisable to make reservations on this train. Cost is \$18.00 one way plus \$3.00 for the bike.

Going to Syracuse Friday, May 28th?

Leave	Arrive	Reservation	Baggage
8:30 AM	2:10 PM	Adviseable	Yes
Noon	5:40 PM	None	None

Return on Monday, May 31st

11:10 AM	4:55 PM	None	None
4:05 PM	10 PM	Adviseable	Yes

Air fare for group of 10 or more is \$39 round trip plus \$10 each way for your bike. (No bargain on the bikes) Anyone interested in a group flight contact me so that we can make reservations before the rush for that weekend.

For Sale Or Trade

For Sale---Ladie's 23" Atala 101 Pro with touring gears and upright bars. \$200. Call Helen Bashkin 673-3596

For Sale---Tandem, Schwinn 5 speed. front Caliper, rear drum brake, used 2 times, weight 64lbs. \$155. Call 263-8904 evenings

For Sale---1975 Gios Torino Pro. 56cm. Columbus D/B Tubing, close road racing clearance, full Campy, many extra goodies. Asking \$675. Larry (201) 222-9220

Bob Herzfelder, Vice-President

TIRED OF IT ALL!!!

TAKE IT TO A PRO

JERRY

"LEE MILES"

PELLEGRINO

Wheels built and all bicycle

repairs done reasonably.

Tel. 831-8146





GEAR '76 - GREAT EASTERN BICYCLE RALLY

REGISTRATION FORM

(Please make separate forms for each registrant)

Advance Registration package discount rates to May 17th, refunds to May 17th, limited facilities, priority on a first received basis. Increased rates after May 17th. Use one form for each registrant and for each child. (No registration fee for children under 12 with parents and not occupying bed.) Make checks payable to "Gear '76" and mail promptly with registration forms to: Gear '76, Onondaga Cycling Club, 113 East Onondaga Street, Syracuse, New York 13202. Persons desiring to room together should submit registration forms together, and also note party name and number on upper left of form (Smith, A. B./Party of 2).

NAME: _____ Age: _____
 (Last) (First and Middle) (If under 12)

ADDRESS: _____

CITY/STATE/ZIP: _____ Phone: _____
 (Please Print Clearly)

PACKAGE DISCOUNT

Registration fee \$10 each; Includes College conference service charge, security, Bikecentennial patches, Gear patch, certificates, maps, programs, etc. (No fee for children under 12 with parents and not occupying bed, but add \$4.00 if desire the patches and certificates.) \$ _____

Lodging:

- I Semi-private, 1 person for 3 nights, \$18.00 per person \$ _____
- II Apartment (Group of 7 registrants only)
 1 person for 3 nights, \$12.00 per person \$ _____
- III Sleeping bag (owned) in gym (limited)
 1 person for 3 nights, \$6.00 per person \$ _____

Meals:

- Meal package (7 meals, including barbecue) \$16.00 \$ _____
- Sunday Night Barbeque only, \$3.50 \$ _____

Bus & Bike Return Transportation Reservations, \$3.00 \$ _____
 (Erie Canal Ride, Syracuse to Rome, easy 50 miles each way)

TOTAL: \$ _____

Note: Room prices do not include linen. Available at cost & deposit.

Because of a multitude of professional and personal commitments, Irv Weisman found it impossible to continue as President and submitted his resignation, to take effect immediately. However, Irv will continue to serve the club in several other capacities, especially in continuing negotiations with MTA regarding bike trains to Westchester. In accordance with the By-laws, as immediate past President, Irv will continue as a member of the Board of Directors. The club is indeed grateful to Irv for his past leadership, innovative contributions and his desire to continue to work on several of his pet projects which will be of value to the club in the next few months.

Bob Herzfelder was nominated for President but because of personal commitments and especially in view of his forthcoming marriage, Bob decided that he could not accept the responsibilities and declined the nomination. Bob will continue as Vice President. Therefore, the Board of Directors, at its meeting on March 23rd, approved the nomination and election of our Treasurer, Sam Freedman, as President of the club, to take effect immediately. The position of Treasurer was declared open and individuals who are interested in serving in this position are asked to contact Sam Freedman and indicate their availability. The Board will make a final decision at its April meeting.

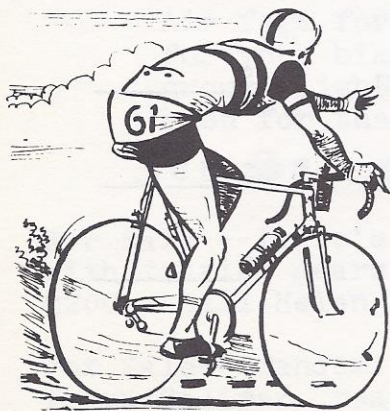
The Board also accepted with regret the resignation of George Borgida as Member-at-Large. George has found it impossible to serve in this capacity but is eager to continue as an excellent ride leader. Jimmy Rex, our former Rides Chairman, was elected by the Board to the vacancy created by George's resignation.

The Board of Directors

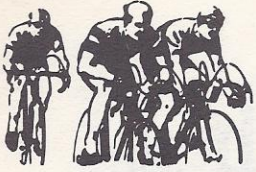
New York Cycle Club

SAMUEL FREEDMAN, Circ. Mgr.
400 CENTRAL PARK WEST - APT. 8R
NEW YORK, N. Y. 10025

FIRST CLASS MAIL



FIRST CLASS MAIL



Rides For The Month



- a) 3 Sat April ADDITIONAL REGULAR RIDE EARLY BIRD MILKMAID Meet 7:00AM, leave 7:15 AM sharp. Led by Art Byers and Al Siegel, this 10-12 mph ride will be for 30-40 miles, returning to the Milkmaid at 10:15 AM to 10:30 AM. NOTE: The ride will be held every Sat. in April. A good turnout and we'll keep it for the entire summer.
- b) 3 Sat April TOUR OF SOUTHERN FAIRFIELD COUNTY A ride. This phantom ride is one of my favorites, as are all routes I've never done before. Expect to get lost north of New Canaan. We'll ride 75-100 miles, or more, at about 15 mph. On the rolling hills of this region you can bet that this will be a rough paced ride. Expect to return to Milkmaid in the late afternoon. The Leader is "Goofy" Ron Kahn. Your Leader will bring an Atlas and leave from the diner at 8:00AM.
- 4 Sun April TOUR OF SOMERVILLE 47 and/or 78 miles B-C ride. A joint venture with the LIBC, this popular ride with Leader Joe Wigodner begins at the Somerville New Jersey Courthouse at 9:30 AM. Galloping hills and a figure eight loop, plus a large expected turnout, make this an ideal ride for all type riders. The pace will be up to the individual. Plan on at least 47 miles if you choose to do only the southern loop. Take the Holland Tunnel to the NJ Turnpike. Get off at the Newark Airport exit. Take route 22 to Somerville. See you there.
- 10 Sat April TOUR OF LLOYD'S HARBOR Leaders Bill Recht and Hubie Girard are going down for the third time. On the slim chance that there won't be a monsoon, this will be a 40 mile B-C ride at a 12-15 mph pace. Some hills(?) are present, so be prepared. Keep your fingers crossed and the ride just may leave I U Willets at 10:00AM. We should be back by mid-afternoon.
- a) 11 Sun April BUILD UP SERIES #1 G ride touring for 15 miles around Queens intended for out of shape and beginning riders. Leader Josh Levin will go super SLOW. Complete this series of rides and you'll be able to.....well, maybe not. Meet 11:00AM at the Unisphere in Flushing Meadows, Queens.
- b) 11 Sun April HENRY HUDSON DRIVE A 25 in 3 C ride of some 40 moderate miles with "Upright" Irv, at 10 mph. If you've done spring practice riding and can shift gears on the hills, you should be ready for this 25 miles in 3 hours along the Hudson Drive. (A hurried river burial for those who fall by the riverside!) Picnic in Allison Park. Meet 9:15AM at Central Park Boathouse, or, 10:00AM at G.W. Bridge (Ft. Washington Ave & 178St.) Return to bridge by 4:00PM.
- c) 11 Sun April RIVERHEAD-SHELTER ISLAND TOUR 65 miles A-B ride. Set your own pace on this joint ride with the LIBC. Leader Marv Kuhn reminds us that the markings are worn, so bring a map. Hey Marv- paint the route over and NYCC will reimburse you! There are two ferry rides on this scenic route by Sag Harbor. Breakfast at 8:00AM by the Howard Johnson's on the Traffic Circle. Assemble at 9:00AM to ride at 9:30 AM from the Municipal parking lot. You'll need 1½-2 hours driving time from the City, so plan on spending the whole day there.

17 Sat April I U WILLETS CENTURY 100 miles A ride. This is a "Beginners" century as the pace will be a slow 10 mph. Leader Josh Levin says "if you can do 70 miles- thats a hundred". Anyway, meet at 7:45 AM to leave at 8:00AM from I U Willets.

- a) 18 Sun April CHERRY BLOSSOM BASH Belleville NJ 40 moderate C miles with "Upright" Irv. 10 mph pace. Take PATH (30¢) at World Trade Center to Newark, thence to the Cherry Tree Grove for a picnic and walk through the groves. (Bring matzoh, Easter eggs, or whatever.) Return via G W Bridge over a few unavoidable hills. Meet 9:00AM at Coliseum (59St. & Bway) or 10:00AM at City Hall. Return to G W B at 4:00PM
- b) 18 Sun April TOUR OF BEDFORD-RIDGEFIELD-NEW CANAAN-AND MILKMAID! 100miles A ride. Here it is! Come and try it with co-leaders Ron Kahn and Jim Rex. This route may surprise you. Leave from Milkmaid at 8:00AM. This will be an all day ride as the pace will be about 13 mph so more will be willing to give it a shot. A sheet of directions will be provided.

20 Tues April MONTHLY MEETING RINALDO'S RESTAURANT, 32 East 32 St. NYC. Meeting is on the second floor. (Bet. Park and Madison)

24 Sat April CLUSTERBUSTER CENTURY 94.8 miles A ride. I promise an extra special treat to add on the rest of the mileage. 15mph fast pace. This is a CENTURY!. Leave 8:00AM from the Arden Valley Rd. parking lot in Harriman St. Pk. (Just off of Rt. 17). Please be there a little early to meet Leader Ron Kahn. Take the THWAY to the Harriman exit. Go south on Rt. 17. Arden Valley Rd. is on the left in a couple of miles (Park entrance sign). Allow 1½ hrs. from NYC. (Only 2 members have been able to complete the ride-3 tried.)

- a) 25 Sun April BUILD UP SERIES #2 25 miles around Queens and Nassau. See 11 Sun April. This ride will leave at 10:00AM. Same place.
- b) 25 Sun April TOUR OF REDBANK 35 miles C ride with Leader Henry Krumwiede. This tour of the Jersey Shore will be at a 10 mph pace. Meet 9:30 AM at the Red Bank N. J. R. R. Station. Allow 1 hr. driving from NYC.

REGULAR RIDES

BEDFORD VILLAGE Sundays, 9:15 AM from the firehouse.

BRIDGEHAMPTON Sundays. Meet 9:30 to ride 10:00AM. Montauk Hwy (Rt 27) in Bridgehampton L.I. Free parking at Grants shopping center. Allow 2 hrs. driving time.

CENTRAL PARK Sat. and Sun. Ride at 10:00 AM from the Boathouse.

I U WILLETS Rd. School. Sat and Sun. at 10:00AM. LIE exit 39S; 1 mile ahead on Guinea Woods Rd. Pre-ride breakfast at Friendlys, LIE exit 37 1 mile south at 9:00AM, Sat. and Sun.

MILKMAID DINER Sat. 9:15 AM at Mamaroneck and RosedaleAves. in White Plains. Take New England Thwy to Mamaroneck Ave exit. Go about 2 mi. N. Free parking at the banks lot across the street.

- 1) PLEASE SEND IN A FEW 40-60 MILE RIDES FOR MAY. OK YOU GUYS?
- 2) GEE, I RAN OUT OF SPACE AND I HAD SO MUCH TO SAY. HOW LUCKY WE ALL ARE. SEE YOU ON THE ROAD. RON KAHN.



This is a report on our
 Sunday----2/29/76
 Rockerfeller Estates Ride



The N. Y. Cycle Club came out of its winter hibernation into the beautiful Westchester sunshine that reached 67 degrees, just perfect for riding. Thirty four riders responded to the challenge :

- | | |
|--|---|
| 1. Denslow Dade - Age 77 | 18. Bill Recht |
| 2. Norman Glubok | 19. Les Bercow |
| 3. Marie Caldiero - Tiger | 20. Al Goldberg |
| 4. Ben Goldman | 21. Eleanor Cartier - Sag Wagon Driver |
| 5. Ron Kahn - Co Leader | 22. Ernest Lampeter |
| 6. Jim Rex | 23. Frank Sanchez - our Photographer |
| 7. Stephanie Kellberg -
Our blonde beauty | 24. Frank Gileta |
| 8. Sue Cartier - age 15 | 25. Harry Rutten - Clocked our ride at
43.12 miles |
| 9. Rankin Johnson | 26. Frank Hirschmann |
| 10. Al Goldman | 27. Bob Metzger |
| 11. Henry Kilz | 28. Roy Hubbard |
| 12. Dick Lord | 29. Melvin Fein |
| 13. Darryl Freedman | 30. Danny Smith |
| 14. Jeffrey Freedman - age 13 | 31. Jerry Lighter |
| 15. Phillip Morton - age 13 | 32. Charley Allen |
| 16. Helen Bashkin - a welcome
new comer to our Westchest -
er riding | 33. Timmy Allen - age 14 |
| 17. Fred Doby | 34. Ralph Irizarry |
| | 35. Ray Cartier |

Ron Kahn led the main group through the first 30 miles to the Eldorado Diner where we all gathered for lunch. As you might suspect, we were strung out over quite a few miles, with about an hour's time separating the front & rear groups. When we reached Rockerfeller's Estate 5 riders cut 11 miles of the ride off & headed directly for the lunch stop. During the final 13 miles 2 of our gorgeous ladies got lost. We sincerely apologize, hope you will forgive us, & give us another opportunity to try very hard not to let that happen again by gracing us with your presence the next ride we plan.

Amazingly enough, not one flat, no bike troubles of any kind. One rider turned back after the first 12 miles by the Kensico Dam because his back was bothering him. Otherwise everyone made the trip in fine style. Needless to say (then why say it) there were some tired & sore riders at the end of the day. But that is a small price to pay for the fun we had.

To those of you who could not come, believe me, we missed you. We understand that transportation for those without cars is a problem. But if you will use the membership directory as a guide as to who lives around you, & make a few phone calls, you'd be surprised how many people would be willing to help. Hope to see all members at our next attempt to treat you to the joy Of Westchester Riding.

Ray Cartier

Photos by Frank Sanchez



EXPERIMENTAL BIKE TRAINS TO WESTCHESTER

At a meeting with representatives of MTA, Penn Central, and myself, a decision was made to experiment with using the Harlem Division of Penn Central RR to carry bikes and riders to North White Plains and beyond. These rides will be on regular Sunday trains, leaving from Grand Central Station, to which will be added a special car to carry the bikes.

The bikes will be loaded by us at Grand Central between 8:45AM and 9:10AM, and unloaded at North White Plains at 10AM. The return train will depart North White Plains at 3:45PM for arrival in Grand Central at 4:45PM. The round trip fare is under \$4 at this time.

Our first such train excursion is tentatively scheduled for Sun. May 23, with Bill Hoffman and myself leading. Future rides, possibly at one month intervals, will need the help of other ride leaders who know the back roads which can be reached from either North White Plains or other stations up the line, such as Mt. Kisco, Bedford Hills, Katonah, or Brewster. So, if you ride in Westchester, and are ready to share your favorite cycling routes with your fellow club members who will be coming up by train, contact me so that we can plan future rides together.

Both the railroad people and I are interested in knowing approximately how many riders are interested in this new service. It would be very helpful, therefore, if you dropped me a line indicating your desire to make use of this service on 1) Sun. May 23 in particular, and 2) from time to time during the cycling season. Obviously, if there are too few users of this service, the service will not be extended beyond an experimental period.

It's your ball now; let me hear from you.

1975 Millennium Results

Name	Phase I.	Phase II.	Phase III.	Phase IV.	Phase V.	Phase VI.	Phase VII.
J. Rex	100 %	200 %	yes	-	100 %	-	-
D. Reed	100 %	30 %	yes	-	-	-	-
L. Cichy	90 %	20 %	yes	-	-	-	-
R. Irizarri	70 %	50 %	yes	-	-	-	-
R. Kahn	60 %	100 %	yes	-	100 %	-	-
L. Bercow	60 %	60 %	yes	-	20 %	-	-
C. Forde	60 %	50 %	yes	-	-	-	-
J. Levin	50 %	40 %	no	-	-	-	-
S. Shackman	?	?	yes	-	90 %	-	-
J. Koshar	?	?	yes	-	90 %	-	-
J. Munson	70 %	40 %	no	-	20 %	-	-
M. Nelson	?	40 %	yes	-	20 %	-	-
S. Bauman	?	40 %	yes	-	20 %	-	-
W. Cooper	?	?	yes	-	20 %	-	-
S. Suarez	?	?	yes	-	20 %	-	-
F. Sanchez	?	?	yes	-	-	-	-
D. Thompson	?	?	yes	-	-	-	-
H. Hirschman	?	?	yes	-	-	-	-
H. Ruttan	?	?	yes	-	-	-	-

For details contact Jim Rex, and for your exercise program see below.

PRESIDENTIAL SPORTS AWARD
 P.O. Box 129, Radio City Station
 New York, N.Y. 10019

Minutes Of Last Meeting

After happy hour, an excellent dinner graciously served, with guests and new members having been introduced, Ron asked the ride leaders to report on last month's rides. Jimmy Rex, Mel Shleifer, Steve Bauman and Joe Messing had all worked hard leading a variety of rides in a variety of terrain. Ben Goldman was unanimously applauded when he publicly thanked Ray and Ellen Cartier for their outstanding and well-attended ride around the Rockefeller Estate. Marie was especially grateful to Ellen for sacrificing her day in providing a sag wagon. A short preview of next month's rides led to a discussion of Ron's innovative suggestion for rating rides outlined in the March bulletin. A lot of pros, cons and opinions were offered. With no agreement in sight, the Board was asked to continue this discussion at its meeting.

Sam Freedman reported that the new membership list consists of 190 members, and that 72 had not as yet renewed. Sam initiated an energetic membership campaign by distributing an attractive new membership application card and encouraged everyone to invite new members into the club.

Irv reminded us about GEAR (see his column) and Frank Sanchez claims that the airlines seem to be more cooperative in arranging for bikes to be carried at a nominal fee. Jerry Koshar invited anyone interested to bike with him from Mt. Kisco to Syracuse for the GEAR rally, a distance of 250 miles to be accomplished in two days.

Jerry Koshar and Ron Kahn are looking into orange and white shirts and are obtaining samples for us to inspect. Jerry Pellegrino modeled an extremely functional orange wind-breaker for which Sam will take orders.

Josh Levin asked for volunteers to assist him in painting arrows on the Long Island route. Josh needs several more hands so please contact him if you can help. Josh also announced that he will begin a series of build-up rides in April starting from Fresh Meadows to help late starters get into shape.

Bill Hoffman announced he will attend the East Coast Bicycle Conference at the end of this month which plans to implement the North-east Bicycle Trail. More from Bill later.

With some agitation and impatience in the air, discussion was held concerning the length of the business portion of the meeting. A motion was made and approved to limit the business portion of the monthly meeting to no more than one hour.

The meeting ended with Bill Recht encouraging everyone to wear protective helmets for safe and happy riding.

Marie

NYcc April 1976

LEGISLATIVE CAPERS

by Irv Weisman

State Senator Caemmerer, Chairman of the Senate Committee on Transportation, has proposed bill S 7351 as an amendment to a bill passed last year. (The words in parentheses are parts of the old bill to be deleted; the underlined words are to be added to the new bill.)

"Where no bicycle lane or bicycle path is provided, every person operating a bicycle upon a highway shall (either) ride either as near to the right side of the roadway as practicable or upon a usable shoulder on the right side of the highway (if a shulder exists on the right side of the roadway, use such shoulder.)"

The present wording is intended to give bike riders the option of riding on either the right edge of the roadway, or the shoulder. It was feared that the previous version implied that a shoulder must be used if it is there.

My worries about this bill arise from the requirement that we ride "as near to the right side of the roadway as practicable." This will rule out riding two abreast which had been the law heretofore. There are many times when the safest thing for a group of riders to do is to occupy a whole lane when there is more than one lane each way. This avoids the severe crowding which occurs when two cars riding side by side pass cyclists. The outside car crowds the cyclists. However, when the outside lane is fully occupied (i.e. cyclists riding two abreast) the auto has to swing completely into the passing lane - it cannot simply pass by crowding the cyclists off the road.

But what about the phrase "where no bicycle lane or bicycle path is provided"? Are we now required to use such nearby lane with its potholes, meandering children, strollers, and baby carriages?

So altho there is cyclist support for Senator Caemmerer's amendment, I'm sorry he ever got started with any of this legislation. It seems designed more to get us off the road than to improve conditions for all concerned.

But the real winner in the legislative derby is Assembly Bill 10033 introduced by Assemblyman Harenberg and sponsored by Assemblyman Hochbrueckner. This is another modification of the same bill which Sen. Caemmerer is amending. Bill A10033 reads as follows:

"Where no bicycle lane or bicycle path is provided, every person operating a bicycle upon a highway shall either ride as near to the (right) left side of the roadway as practicable or if a shoulder exists on the (right) left side of the roadway; use such shoulder."

Neat, huh? Ride on the left side of the road! And these men with their limited understanding of "relative velocities" and "operator reaction times" are in a position to write laws which would cause the death of many cyclists! This is a very dangerous bill, and must not be passed. Write to your Assemblyman and to Assemblymen Fry, Chairman of the Assembly Committee on Transportation, New York Assembly, Albany, N.Y., and attack this legislation. As for S7351, write to your state senator and to Senator Caemmerer and point out our need to ride on the roadways and not to be pushed onto bike lanes which travel nowhere and are occupied by meandering cyclists of all ages.

WHY DO BICYCLE BEARINGS BREAKDOWN?? By ART BYERS

THE HIGH QUALITY PRECISION MANUFACTURED STEEL BALL BEARINGS AVAILABLE TODAY ON BICYCLES SHOULD LAST, FOR PRACTICAL PURPOSES, ALMOST AS LONG AS THE BICYCLE ITSELF IF PROPERLY ADJUSTED AND MAINTAINED. HOWEVER, AS ANY CYCLE SHOP MECHANIC WILL TELL YOU, NORMAL FATIGUE FAILURE (JUST PLAIN WEARING OUT) IS ALMOST NEVER THE CAUSE OF A BEARING FAILURE. IN FACT PERHAPS LESS THAN 5% OF ALL BEARING FAILURES ARE DUE TO NORMAL WEAR. OW

MOST BIKE BEARINGS FAIL BECAUSE OF THE FOL/LING OTHER FACTORS: CONTAMINATION, CORROSION, IMPROPER ADJUSTMENT, LACK OF PROPER LUBRICATION CAUSED BY LACK OF PROPER MAINTAINANCE, AND IN THE CASE OF HEADSET BEARINGS--EXCESSIVE SHOCK LOADING.

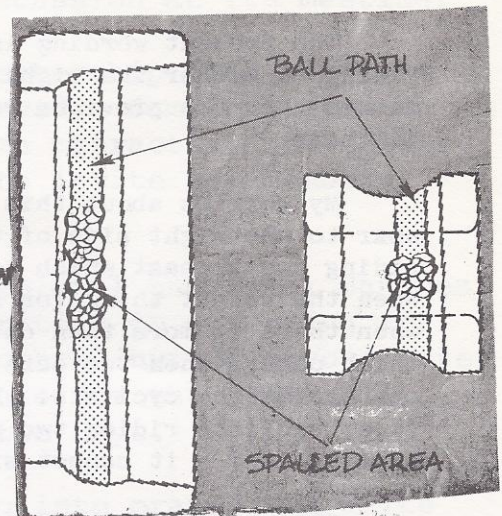
IN ORDER TO UNDERSTAND THE ABOVE, IT IS NECESSARY TO UNDERSTAND NORMAL FAILURE ILLUSTRATED(--DRAWINGS COPIED FROM AN ARTICLE IN DEC '75 AUTOMATION MAGAZINE AS I AM NOT ANY KIND OF AN ARTIST). FATIGUE FAILURE IS TECHNICALLY KNOWN AS "SPALLING" AND IS THE FRACTURE OF THE SURFACES OF RACEWAYS AND BALLS AND THE SUBSEQUENT LOSS OF SMALL PARTICLES OF MATERIAL. IT CAN OCCUR ON CUPS/CONES/OR BALLS AND ONCE INITIATED GETS PROGRESSIVELY WORSE. IT IS DETECTED BY A FEELING OF ROUGHNESS AND VIBRATION IN WHAT SHOULD BE A SILKY SMOOTH RUNNING BEARING.

CONTAMINATION REFERS TO THE ENTRY INTO THE BEARING OF OUTSIDE PARTICLES INCLUDING AIRBORNE DUST, ABRASIVES, AND DIRT. RACEWAYS AND BALLS ARE DENTED OR HAVE PARTICLES IMBEDDED IN THEIR SURFACES STARTING SPALLING. OTHER COMMON SOURCES OF CONTAMINATION ARE DIRTY WORK PLACES, DIRTY HANDS, AND FOREIGN MATTER IN THE LUBRICANT--SO WHEN YOU DO RELUBE YOUR BEARINGS, THINK CLEAN, CLEAN HANDS, CLEAN WIPING CLOTHS, AND TOOLS AND FRESH CLEAN HIGH QUALITY LUBRICANTS SPECIFICALLY MEANT FOR BICYCLES.

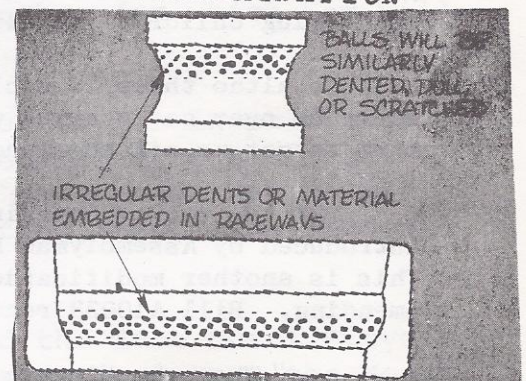
CORROSION REFERS TO AN ACTUAL CHEMICAL ATTACK OF THE BEARING BY OUTSIDE MATTER AND RESULTS FROM EXPOSING THE BEARING TO CORROSIVE FLUIDS OR AIR. AS ANYONE WHO HAS LEFT A STEEL TOOL WET OVERNIGHT CAN TELL

YOU, WATER, WITH OXYGEN FROM THE AIR NORMALLY DISSOLVED IN IT, CAN BE CORROSIVE, WINTER ROADS THAT HAVE BEEN SALTED, INDUSTRIAL STACK EXHAUST, AUTOMOBILE EXHAUSTS THAT NORMALLY COAT DRY ROADS, ETC. ARE VERY CORROSIVE NOT ONLY AIRBORNE AS FINE DUST BUT ALSO AS DISTRIBUTED IN CASUAL ROAD WATER WHEN RIDING IN WET WEATHER. THE RESULT OF CORROSION IS THE BREAKDOWN OF THE SMOOTH SURFACES OF RACEWAYS AND BALLS FOLLOWED BY VIBRATION AND WEAR. THE REMEDY IS PERIODIC CLEANING AND RELUBRICATION.

NORMAL FAILURE



CONTAMINATION



CORROSION

