

## Scientist Says Baseball's A Missile; But, Batters Have Known It All Along

Cleveland-Science Service—A baseball, often described as the world's most popular unguided missile, is subject to many of the factors that work on a ballistic missile. For example, cold, dry air can rob long ball hitters of home runs. This happens, Dr. W. Milton Swanson of Case Institute of Technology here reports, because the air is more dense on a cold, dry day than on a hot humid day. Under otherwise identical conditions, this difference in air density can result in a discrepancy of 10 to 20 feet in a ball hit 400 feet. This means that pitchers

70 to 90 miles an hour. This difference is partly compensated for by placing the mound three or four feet higher than the bottom of the strike zone at home plate.

Depending on its direction of spin, Dr. Swanson reports, a baseball can curve five to eight inches in any direction. Most pitchers can give a ball a rotation of some 1,200 to 1,800 revolutions per minute.

Scientists are still not sure whether a curve ball can "break," says Dr. Swanson. A good deal of what appears to be a "break" may simply be due to an optical illusion similar to that seen when watching an approaching train. In the distance a train seems to be moving at a relatively slow speed, but the closer it comes, the greater its speed appears.

During the last half of the 1/4 of a second that a curve ball is in the air, its path de-

## SPORTS

viation is twice as much as during the first half. Thus, if the ball actually curves seven and a half inches during its entire flight, it will curve five inches during the last half of its trip to the plate. Since the last half of its flight takes 3/4 of a second, a batter needs good reflexes to be able to hit a curve ball at all. If he misjudges the flight of the ball by an inch or so, he will hit an easy pop fly or a grounder.

A knuckle ball does not rotate much and can move up and down and from side to side in a confusing manner. This erratic movement, Dr. Swanson says, is caused by the irregular pattern of seams on the non-rotating baseball.

Friday, July 17, 1959

MAIL TRIBUNE, Medford, Or. 9

## Woods, Water, Wildlife

By Hank DeVoss

During the past few years, I have heard many complaints from sportsmen regarding policies of the Game Commission. Sometimes these complaints are legitimate in that there seems good cause for them but most of the time the complaints seem to be an attempt to blame the Game Commission for a lack of success at hunting and fishing. A case in point is the opening day at Diamond lake a couple of years ago when fishing was poor for most and the story was that the Game Commission fed the fish tons of hamburger the night before. How this was accomplished varied with the storyteller; some claimed they saw barges out in the lake and others swore it was done by airplane. All of them were certain that they didn't catch fish because of the actions of the Game Commission.

### A SURE CURE

A sure cure for the type of ignorance displayed by many of the critics would be to spend a day with one of the resident biologists of the Oregon Game Commission and to experience some of the problems they have to deal with every day. This was my good fortune the first of the week when I spent a day with Cole Rivers, the fish biologist for Jackson and Josephine counties.

### SCIENCE VS. GUESSING

One of the first reactions I felt was how in the world do you decide where to start in trying to solve some of these problems. Most of the biologist's work is problem solving because he knows so little about the habit of fish and their reactions to man's manipulation of their habitat. Sometimes we forget that this field of work is less than twenty years old in Oregon and that the guesses that most sidewalk biologists think will solve all problems won't work for the man who can't afford guessing. If he tries something he has to do it as scientifically as possible in order to know what will and won't work and why. This takes time and is hard on the sportsmen who want their answers now.

### BIG AND SMART

One of the most interesting things I experienced on this field trip was watching the removal of trapped summer steelhead to a tank truck for transportation to the Butte Falls hatchery. These fish are bypassed into a trap when they pass over the counting board at Gold Ray dam and this fisherman got quite excited when he saw the size of the fish. Statistics show that the average size of summer steelhead caught on the Rogue is about 16 inches. The fish in the trap were all larger than this and the biggest was a 28 incher that would pull the scales down to 9 pounds quite easily. These fish averaged about 22 inches and most of them were in the five pounds category. I asked Cole about the size difference between the fish caught by fishermen and the ones in the trap and he says that fishermen just don't seem able to hook into the big ones.

### WARNING

Since these fish are to be used for attempts to restock the Rogue with summer steelhead I would think this a good time to pass on a warning to fishermen. If the fish pass on their characteristics of being hard to catch we are either going to have a lot of summer steelhead some day and also a lot of frustrated fishermen or we're going to have to be better fishermen.

### WILD FISH

It was quite exciting to watch Cole get into the trap and try to net these wild fish. The net was made of rubber in order to avoid harming the fish and the cramped quarters and fast rushes of the fish made for much splashing and near misses. When a fish was netted it was put into a small tank that contained an anesthetic which knocked the fish out long enough to enable their being carried to the waiting hatchery truck. We all hoped they had a safe journey and would live to fulfill their destiny of replenishing the river with many large, fast and smart fish.

### ROGUE CHINOOK

While watching the salmon moving up the ladder and across the counting board I asked Cole about the differences between individual fish. Some seemed much fatter than others. I was told that the heavier fish were the true Rogue spring chinook while the others were the results of various plantings of fish from other rivers. Looking at these monsters made it easy to see why fishermen came from all

## Jack Curtis Hurls A Wenatchee Win

By United Press International  
Thirteen was the lucky number for the Wenatchee Chiefs Thursday night.

Jack Curtis was credited with his 13th win of the season as he twirled a neat five-hitter to lead Wenatchee to a 6-1 Northwest League baseball victory over Yakima. The win moved the Chiefs to within a half game of the league-leading Bears.

Curtis gave up the Bears' only run in the first inning and showed them zeros the rest of the way. He struck out eight and walked three.

Wenatchee hit the scoring column in the third inning when Jerry Mason hit a two-run double. Two runs in the sixth inning and one each in

the seventh and eighth merely insured the victory.

Other action saw Eugene defeat Lewiston, 3-2, and Tri-City take Salem, 5-3.

Eugene's John Orsino tripled in the bottom of the ninth inning and then raced home on Mat Matlock's single to give the Emeralds their win over the Broncos. Lewiston had tied the count in the top of the ninth with a two-run rally.

Gene Calder went the distance for Eugene, getting win number 12 against seven defeats.

By defeating Salem, Tri-City moved to within a half game of climbing out of the league cellar. A two-run homer by Mac Schmidt in

### BARROW JOINS CATS

Fenelon Falls, Ont. — (UPI) — John Barrow, former University of Florida tackle, has signed a 1959 contract with the Hamilton Tiger Cats, a Canadian professional football team. Barrow had been reported heading for the Detroit Lions of the National Football League before coming to terms.

### NO CENTS TO IT

Tampa, Fla. — (UPI) — Police insisted that John J. Edenfield, 43, pay his \$15 bail on a drunk charge by check. The only cash Edenfield had with him was 4,000 pennies, collected from the vending machines he operates.

the third inning was a big blow for the Braves. Tri-City won it in the fourth frame when Twink Pederson doubled and later scored on a sacrifice fly.

## Vargas Due In Portland

Portland — (UPI) — Mexican heavyweight contender Reuben Vargas was due in Portland today to wind up training for his nationally televised bout with Eddie Machen at the Centennial Exposition arena next Wednesday.

Vargas will take his first Portland workout at the Grand Avenue Gym Saturday at 2 p.m. Machen has planned workouts for noon each day.

Reports from San Francisco indicate that Vargas will be given a non-title fight with heavyweight champion Ingemar Johansson next fall in Sweden if he stops Machen.

Machen, a Portlander who was rated number one contender in the heavyweight division until he was knocked out by Johansson last fall, whipped Vargas in a San Francisco bout last May.

The videoed main event will get underway at 6 p.m. Wednesday with a 200-mile area around Portland blacked out.

Promoter Tommy Moyer has announced plans for two supporting 10-round bouts, a six-rounder, and a pair of four-heat clashes.



CAMPING—Shown above are campers at Diamond lake, where the Medford YMCA conducts a summer-camping program for boys. Registration for the week of July 19-25 still are being taken at the local Y. Cost of the camp is \$20 for YMCA members with an additional \$2 charge for non-members. Y officials said. Transportation for boys who do not have transportation available will be arranged at the YMCA.

# SAVE

## HATFULLS OF MONEY

### SKINNER'S

# BIGGEST

## DEMONSTRATOR SALE

Buy a 1959 Buick or Cadillac and SAVE!

### '59 CADILLAC

Two-Tone Blue  
SEDAN DeVILLE

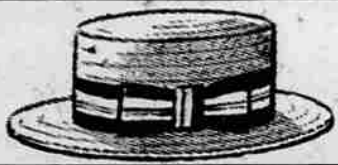
Only 1850 miles. Save 1st year's depreciation. Lon and Phyl used it the most.



### '59 BUICK

ELECTRA  
4 Door Hardtop

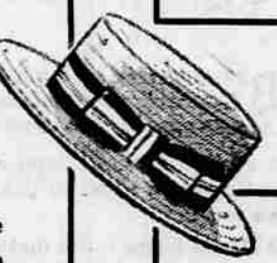
Light grey—Only 4775 miles. Save 1st year's depreciation. This is Norm's pride and joy.



### '59 BUICK

INVICTA  
4 Door Hardtop

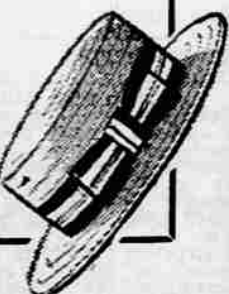
Light green—Only 2729 miles. Save a year's depreciation. Wes hates to part with this.



### '59 BUICK

LE SABRE  
2 Door Hardtop

Beautiful black—Fully equipped. Only 4375 miles. Del has really loved this car.



SAVE THAT  
FIRST YEAR'S LOSS

# SKINNER BUICK-CADILLAC

143 S. RIVERSIDE

MEDFORD

# NEW LOW PRICES



1959 Gates  
Air-Float  
NYLON  
Special Only

\$16<sup>95</sup>  
6.70-15  
tube-type.  
Plus tax &  
retreadable  
trade-in.

Lowest price  
we've ever offered  
on this tough, shock-resistant  
NYLON tire. Gives extra trac-  
tion, skid resistance, and extra  
mileage!

- ★ NYLON Cord Body
- ★ COLD RUBBER Tread
- ★ 1959 Design

Same tire made with TYREX (the new, improved rayon cord)

\$13<sup>95</sup>  
6.70-15  
tube-type.  
Plus tax &  
retreadable  
trade-in.



This tire is built with selected TYREX cord for ruggedness, durability.

BUDGET TERMS: \$1 down with your retreadable trade-in puts any new Gates Tire on your car.

# Bud's Tire Exchange

1600 N. Riverside Ave.

SP 2-4806