

levine's sports line

Lonely Week for Wettstone

By PAUL LEVINE
Collegian Sports Editor

It won't be an easy weekend for Gene Wettstone. Penn State's gymnastics coach of 30 years has seen many an NCAA championship, but never one without his Lions competing.

The 1968 version of the collegiate gymnastics championships gets underway tomorrow in Tucson, Ariz., and for the first in three decades, Penn State won't be in the running for the team title. Instead, Temple will represent the East in a four-team run for the honors, and the Lions will be restricted to four somewhat lonely competitors. But as lonely as Bob Emery, Tom Clark, Joe Litow and Dick Swetman may be, the man on the sidelines will feel quite a bit worse.



LEVINE

Gene Wettstone is not used to losing. In 30 years at Penn State his teams have totaled 139 dual meet victories and only 33 defeats. Eight of his Nittany Lion teams have won national titles, and Penn Staters have captured 11 NCAA all-around crowns. From that number came five Olympians, and Wettstone himself coached two U.S. Olympic teams. In the last four years, Wettstone's teams have won 32 dual meets and lost only one. After breezing through

a 7-0 record this season, a Lion championship in the Eastern tournament seemed a certainty.

But Carl Patterson's crew of frustrated Philadelphians upset the Lions, and Temple—not Penn State—carries the East's hopes into tomorrow's action.

Temple had been gunning for the rematch ever since its loss to the Lions during the regular season. In that affair, State came from behind to upend the Owls by .70 point. But Temple got its revenge in the Eastern tournament at Annapolis and State was left out of the national action.

For Lion fans the only interest now will be the all-around competition where Emery is State's lone competitor. But the little Lion junior who followed the shadow of NCAA champions Mike Jacobson and Steve Cohen isn't given much of a chance. Emery will be up against Southern Cal's Makato Sakamoto and a host of other talents from the West.

"Sakamoto is definitely the favorite," Wettstone said yesterday. "Emery can be a threat, but only if he hits on every event. So far this year, he's been too inconsistent to defeat someone like Sakamoto."

Ever since the Easterns, where Emery broke on the horizontal bar, the Lion junior has been a young man with a mission.

"Emery wants to prove something to somebody," Wettstone said. "He's been working hard every day—maybe too hard."

Penn State's best bet for an individual title would have been Paul Vexler, who won the rings title at the Easterns and last year finished second in the NCAA long horse competition. But Vexler elected to sit out the national competition, and his coach says he doesn't blame the diminutive strongman.

"Nobody can blame Vexler for not wanting to compete," Wettstone said. "All the emphasis has been taken off the individual events. That's the way it should be, of course. The all-around is the important thing for the individual. If we were in the team competition, Vexler would be glad to compete."

Wettstone has long been a leader in the movement to de-emphasize the individual events in an attempt to strengthen the all-around competitors. To Wettstone, nothing makes less sense than training a gymnast for just one event.

"I remember a number of years ago when the championships were held at UCLA," Wettstone said. "Rope climbing was still an event then, and we had a specialist in the event. After taking him all the way to California, he did his routines twice, and broke each time. It takes 3.9 or 4.0 seconds to climb a rope. He had gone all the way across the country to compete for eight seconds and didn't do a thing right. The rest of the weekend he hid on the beach."

Gene Wettstone won't be hiding this weekend in Tucson. But the proud old strategist won't be his old self either. His long stride might lose a bit of its bounce, the confident smile a bit of its shine. Not an easy weekend for old Gene.



GENE WETTSTONE



—Collegian Photo by Paul Levine

LION FIRST BASEMAN Mike Egleston cuts loose a throw to the plate in practice yesterday. Tomorrow the Penn State baseball team opens its 1968 season with a game at Bucknell. The Lions' first home game will be Saturday afternoon against Gettysburg.

Can Increase 'Take Off Velocity'

Scientific Study May Aid Vaulters

Many pole vaulters who use fiberglass poles could theoretically add a foot-and-a-half or more to their best jumps if they heed the results of a scientific study reported here by two researchers from the University.

A profile of the ideal pole vault plus advice for getting the most out of the once controversial fiberglass pole was presented by Charles J. Dillman and Richard N. Nelson of Penn State's Biomechanics Laboratory at the National Convention of the American Association of Health, Physical Education and Recreation.

Attended Citadel Dillman, who gave the paper, first became interested in making a detailed scientific study of a fiberglass-powered pole vault when he was a varsity vaulter at the Citadel four years ago.

After using a combination of modern cinematographic techniques, precise body motion studies of actual jumps and computer analysis, the researchers concluded that the average pole vaulter could improve his jump dramatically by increasing his "controlled take off vertically" and exploiting more efficiently the energy stored and returned by the fiberglass pole as it bends and unbends.

In the study, the researchers filmed 125 jumps of four Penn State

varsity vaulters during a four week period. They ranged in age from 19 to 22 and in weight from 136 to 180 pounds. Their pole vault heights ranged from 12 1/2 to 15 feet.

In the laboratory, the biomechanists broke each vault down into its fine points by studying every fifth film frame running from before the vaulter left the ground to completion of the jump. For each frame studied, they recorded the degree the pole bent and calculated the position of the vaulter's center of gravity as it moved through the entire jump process.

Used Computer By feeding that basic data into a computer, they were able to compare the individual "biomechanical components" of different phases of the jump and establish "energy patterns" for each jump. Their calculations included the vertical and horizontal velocities of the jumper as well as the energy traded between the jumper and the pole as it bent and uncoiled.

According to the Penn State study, a vaulter should be able to develop a "mechanically perfect jump" by carefully controlling and increasing his initial take off velocity (his running approach up to the point where his feet leave the ground) so as to bend the pole to the extent that the fiber-

glass pole would give him the greatest upward boost.

The mechanically perfect pole vaulter should then "ride" the pole as it uncoils, taking time to get into a good vertical position, and adding more energy by pulling upward with his arms.

By comparing the key points of two jumps made by the best vaulter studied, the researchers concluded that he could probably have jumped considerably higher than the recorded 15 feet if he controlled his take off vertically better and coordinated it with the energy patterns produced by his interaction with the pole.

Could Do 16 1/2 Feet "Through practice, if that vaulter developed his technique, timing and strength, so that he was able to perform the energy pattern of vault number two with the take off velocity of vault number one, he would theoretically be able to jump sixteen-and-one-half feet," Dillman said.

The Penn State scientists told the AAHPER meeting that even the most experienced coach can not tell through field observations or conventional slow motion films if his pole vaulter has the right or wrong take off velocity or how well he is performing the correct energy patterns.

"Actually, the only way to do so

without guessing would be to perform a mechanical analysis such as the one completed in this study," Dillman pointed out, adding:

"This may seem to be a time-consuming job, but through recent advances in cinematography, automated film analysis systems and computers, it is now possible at the Penn State Biomechanics Laboratory to make the films on one day and the completed results by the next day's practice session.

"In the future, we hope to have a sports analysis center where films of athletic performances could be quantitatively analyzed to help reduce some of the uncertainties in the coaching of athletics."

Supported by Bureau of Research Dillman is a native of Morrisville, Pa. He received a B.S. in Physical Education from the Citadel in South Carolina in 1964 and a M.S. in Physical Education at Penn State in 1966. His present Research Traineeship is supported by the Bureau of Research, USOE.

Richard C. Nelson, who is director of the Penn State Biomechanics Laboratory is Dillman's adviser on the pole vault project. The Biomechanics Laboratory is part of the College of Health and Physical Education and Recreation.

NCAA To Reply on Track Feud Today

WASHINGTON (AP) — The National Collegiate Athletic Association appears ready to deliver its long-awaited answer today to the Senate-sponsored compromise suggested in the bitter track feud threatening to entangle the U.S. Olympic team.

There was no advance indication that the NCAA would agree to the proposed peace pact with the Amateur Athletic Union in the battle over control of amateur athletes.

Not even Sen. Warren G. Magnuson, D-Wash., chairman of the Senate Commerce Committee and a leader of arbitra-

tion efforts, was granted an early look at the NCAA reply.

"They very carefully didn't tell us," a source said.

The NCAA and its affiliate the U.S. Track and Field Federation, scheduled a news conference for 3 p.m. EST today to make public its response.

CAMP CHOCONUT

Friendsville, Pennsylvania (17 miles south of Binghamton, N.Y.)

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The Director will interview students at Penn State on Thursday, April 11 at Room 121 Grange Building. Arrange a convenient appointment time by seeing the secretary or telephone 865-6301. This is an excellent opportunity to develop skills with people in small numbers while earning, and having a rewarding summer.

S. Hamill Horne, Director

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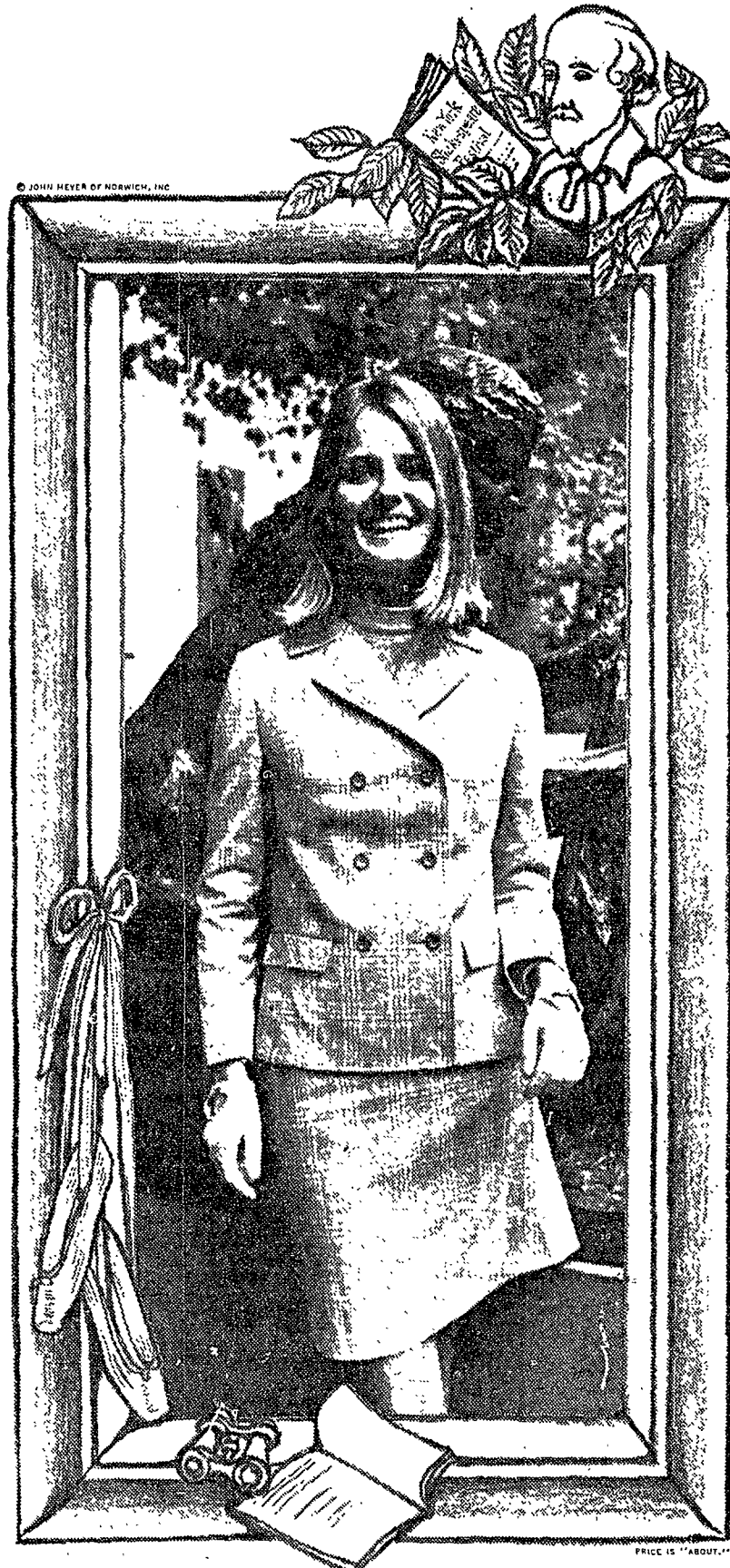


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