

Little Miss Muffet

University Park, Pa. -- Black widow spiders and cockroaches are helping scientists at The Pennsylvania State University to untangle the web of mystery surrounding nerve membrane operations.

Using the adult female spider's venom, Dr. Thomas Smyth, Jr., associate professor of entomology, and his former graduate student, Dr. David Griffiths, have demonstrated that the venom's action is similar in cockroaches and higher animals.

Dr. Smyth explains that in previous studies conducted by other scientists with frogs and cats, the spider venom selectively destroyed specific parts of the animals' nerve endings. In experiments with cockroaches, Dr. Smyth and Dr. Griffiths obtained similar results even though that insect's nerves are chemically and functionally different from those of the higher animals.

The experiments with cockroaches indicate that the venom's action on nerve membrane is similar in widely disparate parts of the animal kingdom.

The Smyth-Griffiths study is detailed in a paper, "Action of Black Widow Spider Venom at Insect Neuromuscular Junctions," published recently in the journal, *Toxicon*.

Currently, Dr. Smyth and Richard Ornberg, a graduate student in biophysics, are trying to separate the venom, a complex mixture of proteins, into its individual parts or fractions.

Dr. Smyth says, "Having the purified venom fractions should help us to find out what it is about the nerve endings that makes them different from other membranes."

Ornberg has worked out the procedure for separating the venom in collaboration with Dr. Allen W. Benton, associate professor of agriculture at Penn State. The procedure, an electrophoretic separation of the venom, has never been done before.

Dr. Smyth emphasizes that black widow spider venom is "mainly a tool" in the study. The venom is gathered by freezing spiders reared in the laboratory and then removing the venom glands after the spiders thaw. Ornberg points out that they are "very careful with the spiders" which are never allowed out of their plastic containers.

Dr. Smyth, who has been studying the black widow for over three years, says the spiders are rare but are sometimes found in places such as old stone walls. He explains that the spiders bite and inject their venom with their mouth parts. Although the victim may be very sick for several days, he adds, the bites are seldom fatal.

"Fatalities are usually attributable to hypersensitivity or an allergic reaction," he says.

In order to avoid being bitten, Dr. Smyth advises, "Stay out of the spider's favorite spots, dark corners, outhouses." If you get bitten, he says, "Put on a constrictor bandage and immediately seek medical attention."

Although an antidote to the venom is available, Dr. Smyth sees improved methods of treatment for black widow spider poisoning as additional fallout from the research.

C.C. Bowling Results

October 24, 1973

TEAM	Won	Lost	Percentage
1. No Names	16	0	1.000
2. Keglers	13	3	0.813
3. Beta Chi	11	5	0.688
4. "I-!"	10	6	.625
5. XGI's	9	7	0.563
6. Spoilers	8	8	0.500
7. Dinkledorfs	6	10	0.375
8. Kozak	6	10	0.375
9. New Names	5	11	0.313
10. Strike Outs	5	11	0.313
11. ITE	2	14	0.125
12. Alleycats	1	15	0.063

(500 CLUB)

1. Ed Houser (Keglers) - 561
2. John Yee (No Names) - 552
3. Jim Herbst (Keglers) - 523
4. Paul Heintzmann (XGI's) - 522
5. Mike Vitale (Spoilers) - 512
6. John Pruzinsky (No Names) - 510
7. Dave Kurowski ("IT!") - 509

No Names (4) - New Names (0)
 Dinkledorfs (4) - ITE (0)
 Strike Outs (4) - Alleycats (0)
 XGI's (4) - Kozak (0)
 Keglers (3) - Beta Chi (1)
 "IT!" (2) - Spoilers (2)

MEN'S INDIVIDUALS

H.A. Ed Houser (Keglers) - 184
 H.S. Mike Vitale (Spoilers) - 575
 H.G. Paul Heintzman (XGI'S) - 215

(200 CLUB)

1. Mike Citale (Spoilers) - 208
2. John Yee (No Names) - 206
3. Dave Kurowski ("IT!") - 200

WOMEN'S INDIVIDUALS

H.A. Barb Keeler (Dinkledorfs) - 125
 H.S. Phyllis Mashman (Dinkledorfs) - 416
 H.G. Dee Hribovsky (Alleycats) - 157

Remember, last day for make up week is November 14, 1973.

October 31, 1973

TEAM	WON	LOST	PERCENTAGE
1. No Names	20	0	1.000
2. Keglers	17	3	.850
3. "IT!"	13	7	.650
4. Spoilers	11	9	.550
5. Beta Chi	11	9	.550
5. XGI's	10	10	.500
7. New Names	9	11	.450
8. Dinkledorfs	6	14	.300
9. Strike Outs	6	14	.300
10. Kozak	6	14	.300
11. ITE	5	15	.250
12. Alleycats	2	18	.100

(500 CLUB)

Mike Citale (Spoilers) 550
 John Pruzinsky (No Names) 534
 Ed Houser (Keglers) 521
 Murray Sharp (No Names) 504
 Paul Heintzman (XGI's) 502

No Names (4) - Beta Chi (0)
 New Names (4) - Kozak (0)
 Keglers (4) - Dinkledorfs (0)
 Spoilers (3) - Strike Outs (1)
 "IT!" (3) - XGI's (1)
 ITE (3) - Alleycats (1)

MEN'S INDIVIDUALS

H.A. Ed. Houser (Keglers) 181
 H.S. Mike Vitale (Spoilers) 575
 H.G. Paul Heintzman (XGI's) 215

(200 CLUB)

Ed Houser (Keglers) 207
 Dave Kurosky ("IT!") 203
 Mike Vitale (Spoilers) 200

WOMEN'S INDIVIDUALS

H.A. Phyllis Mashman (Dinkledorfs) 123
 H.S. Barb Keeler Dinkledorfs) 430
 H.G. Dee Hribovsky (Alleycats) 157,156

Last day for make-up week is November 14, 1973!!!

RECREATION ATHLETIC NEWS

Football

FLAG FOOTBALL:

Standings as of Wed., Oct. 24:

	W	L
Schaffer	2	2
Rag Time	4	0
REO Speed Wagon	6	0
Loose Ends	2	4
Brotherhood	4	1
NADS	2	3
X.G.I.'s	3	2
Bender Bros.	0	6
Alpha Omega	4	2
Foul Balls	2	4
P.S.E.A.	0	5

FLAG FOOTBALL SCORES:

Thursday, Oct. 18:

Rag Time - 25
 Foul Balls - 0

Monday, Oct. 22:

Loose Ends - 21
 P.S.E.A. - 0

REO Speed Wagon - 24
 Schaffer - 0

Brotherhood - 24
 Foul Balls - 0

Alpha Omega - 20
 NADS - 6

Tuesday, Oct. 23:

X.G.I.'s - 20
 Bender Bros. - 13

Wednesday, Oct. 24:

Foul Balls - 18
 Loose Ends - 13

NADS - 20
 Bender Bros. - 14

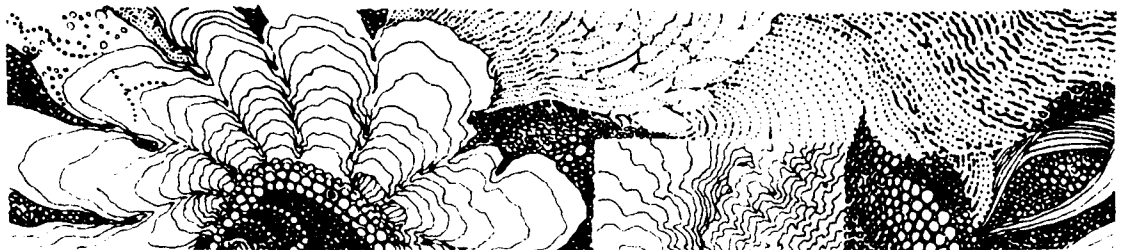
Alpha Omega - 26
 Brotherhood - 0

REO Speed Wagon - 21
 P.S.E.A. - 6

Thursday, Oct. 25:

Rag Time - 34
 Schaffer - 8

All the flag football games scheduled for Monday, October 29th were cancelled due to the weather. The team captains of each game that was rained out should check with Mr. Smitley for a re-scheduling time.



WHIRLPOOL:

Whirlpool hours are from 8:00 a.m. to 5 p.m., Monday thru Friday. The whirlpool CANNOT BE operated without an attendant on duty. In cases of emergency during off hours, check with the campus nurse!! ALSO: The whirlpool cannot be used for any purpose unless the person / persons have had prior approval from the doctor or nurse.

BASE GYM:

Any faculty and/or staff who have free time around 4:00 p.m. each day are invited to the Base Gym for an "open gym" period.

VARSITY BASKETBALL:

All basketball members are reminded that physicals must be completed at the earliest possible time in order to be on the team.

Test Dates To Remember

Exam	Dec. 8, '73	Nov. 13, '73	Nov. 20, '73	Test of English as a Foreign Language (TOEFL)	Jan. 5, '74	Nov. 29, '73
Graduate Record Exam (GRE)	Jan. 19, '74	Dec. 27, '74	Jan. 2, '74			
Law School Admission Test (LSAT)	Dec. 15, '73		Nov. 23, '73			
Admissions Test for Graduate Study in Business (ATGSB)	Jan. 26, '74		Jan. 4, '74		Jan. 12, '74	Dec. 17, '73
National Teachers Exam (NTE)	Jan. 26, '74		Jan. 3, '74			
College of Podiatry Admissions test (CPAT)	Feb. 16, '74		Jan. 30, '74			

Miller Analogy Tests (MAT's) are administered, by appointment, in the Counseling Office, W117.

Applications for these examinations, as well as study guides for some of these tests are available on a two week loan basis, in the Counseling Office, W117.
