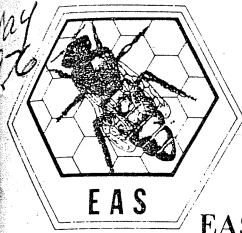


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EAS JOURNAL

EASTERN APICULTURAL SOCIETY OF NORTH AMERICA, INC.

MAY, 1976

BEEKEEPING SHORT COURSE 1976 DELAWARE VALLEY COLLEGE, DOYLESTOWN, PA. 18901

Summer: Wednesday June 23, Thursday June 24 and Friday June 25, 1976

Delaware Valley College will be offering its regular summer three-day beekeeping short course this year. The course is being offered under the direction of Dr. Robert Berthold (Assistant Professor of Biology) in cooperation with Mr. Jack Matthenius (New Jersey Supervisor of Bee Culture). Instruction will take place on the Delaware Valley Campus, with the College bee yards and small scale honey house being utilized.

About 100 persons attended the 1975 summer short course. Included in this group were experienced beekeepers, novices, and those considering taking up beekeeping as a hobby. There were also quite a few educators who were planning to use the information presented during the short course in their own classroom situation.

Total cost for the three days of instruction is \$17 (this does not include meals or lodging). An application for the course or further information may be obtained by writing Dr. Berthold, c/o Delaware Valley College, Doylestown, Pa., 18901, or calling him at Area Code 215-345-1500.

On Saturday, June 26, Mr. Paul Raybol, N.J. Department of Agriculture Apiary Inspector will give a talk on queen and package bee production. The talk will begin at 1:30 p.m. in Mandell Hall on the Delaware Valley College campus and be preceded by a bring your own picnic lunch beginning at 12 noon. There is no charge, and anyone interested is invited to attend.

- PROGRAM -

Day 1 - Wednesday June 23, 1976

9:00 A.M.	Registration and Coffee (Mandell Hall Auditorium).
9:45 A.M.	Welcome to Delaware Valley College
10:00 A.M.	Introduction of Participants
10:15 A.M.	Honey Bee Life History (Film)
11:00 A.M.	Bee Yard - Manipulation of Colony and Members of Hive
11:30 A.M.	Lunch
1:00 P.M.	Beekeeping Equipment and How to Assemble
2:00 P.M.	Major Honey Bee Diseases & Enemies
2:45 P.M.	Bee Yard - Colony Manipulation Class Assembling of Equipment

Day 2 - Thursday June 24, 1976

9:00 A.M.	Obtaining Your Bees
9:45 A.M.	Bee Yard - Establishing Colonies
10:00 A.M.	Coffee Break
10:30 A.M.	Summer Management including Swarm Prevention & Control
11:30 A.M.	Lunch
1:00 P.M.	Managing for Honey Flow
1:45 P.M.	Successful Overwintering
2:15 P.M.	Queen Rearing
2:45 P.M.	Bee Yard - Queen Rearing & Introduction

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Continued on Page 2

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BEEKEEPING SHORT COURSE

Continued from Page 1

Day 3 - Friday June 26, 1976

9:00 A.M.	Nectar Producing Flora
10:00 A.M.	Coffee Break
10:30 A.M.	Beekeeping Organizations and Services
11:15 A.M.	Questions and Answers
11:30 A.M.	Lunch
1:00 P.M.	Presentation of Certificates
1:15 P.M.	Removal, Extraction and Processing of Honey Crop
1:45 P.M.	Marketing the Honey Crop and Beeswax
2:15 P.M.	Bee House - Removal, Extraction, and Bottling of Honey. Handling and use of Beeswax. Mead making.

E.A.S. MEETING SCHEDULE

- 1976 Meeting**
V.P.I. & S.U., Blacksburg, Va., Aug. 11-14.
- 1977 Meeting**
University of Delaware, Newark, Del., Aug. 17-20
- 1978 Meeting**
Ohio.
- 1979 Meeting**
Ottawa, Canada (if approved)

EAS JOURNAL Eastern Apicultural Society of North America, Inc.

President	Homer Powers 203 North Governor St. Richmond, Virginia 23225 Office phone (804) 770-3516 Home phone (804) 272-4633
First Vice-President	Jack Jones, Jr. 1403 North Courthouse Road Arlington, Virginia 22201 Office phone (703) 525-8585 Home phone (703) 893-1690
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Co-Editor	J.R. Wojciechowski 109 N. Feltus St. South Amboy, N.J. 08879

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*Of which \$2.00 is subscription to Journal.

BEE THEFTS AGAIN HIT RECORD HIGHS

Bee colony thefts hit new highs during the first two months of 1976, the California Department of Food and Agriculture reported recently.

The state reported a new single month high of 634 colonies stolen in February. In the first two months of the year, there were 14 thefts with 1,141 colonies taken. Last year, in the similar two-month period, there were nine thefts and 848 colonies reported stolen. The figures in 1974 were seven and 322 and in 1973 they were five and 563.

Bee thefts began to worry apiary owners in 1973 when a total of 1,185 colonies were reported missing in 24 separate incidents. The numbers climbed to 1,164 and 32 in the following year and hit record highs of 2,555 and 49 in 1975.

The state's chief apiary inspector Leo Vanderpool attributes the upward spiral to economics. "It seems to have begun when the 1973 recession hit the nation," he said.

Broad publicity on heavy court penalties for bee theft has made law enforcement officials more aware of the crime wave, he noted and said, "I hope this factor will help to bring it to a screeching halt."

Last year, the most thefts occurred in April when 14 incidents were reported and 491 colonies stolen. It was the third highest number of colonies stolen during the year, after February's 621 and August's 620.



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EASTERN AGRICULTURAL SOCIETY General Rules for All Shows

1. All entrants, whether or not they attend the Conference, must be registered with and have paid the registration fee to the Eastern Agricultural Society.
2. Only one entry in each class may be made by an individual family.
3. Identifying labels on entries are forbidden.
4. Entries can be registered Wednesday night 8 - 9 p.m. and Thursday morning 8 to 9:30 a.m.

GADGET SHOW

Prize ribbons will be awarded to the top six winners in each class.

Class 1 - Large devices (honey extractors, wax-rendering equipment, etc.)

Class 2 - Hives or machines (lifters, weighers, etc.)

Class 3 - Small miscellaneous items.

Class 4 - competitive exhibit (no prize).

All entries must be accompanied by a typed or written explanation. This is to be used in scoring by the judges.

Scoring Objectives:	Maximum Pts.
1. Explanatory test	25
2. Practicality	50
3. Ease of reproduction	15
4. Help to beekeeping	10
	Total 100

BEESWAX SHOW

Prize ribbons will be awarded to the top six winners in each class.

Class 1 - Single piece, pure Beeswax, 1 lb. or more.

Class 2 - Candles, dipped, one pair, pure Beeswax.

Class 3 - Candles, molded, one pair, pure Beeswax.

Class 4 - Candles, fancy, one pair, pure Beeswax.

Class 5 - Candles, novelty, six assorted, containing Beeswax.

Class 6 - Novelty, Beeswax with additives permitted.

Special rules:

1. All entries in Class 1 must be covered with clean, transparent plastic film.

2. All entries in Class 5 must contain some Beeswax. Entries in this class are for colored and novel-shaped candles.

3. All entries must have been made by the exhibitor.

Scoring Objectives:	Maximum Pts.
1. Cleanliness	35
2. Color and aroma	30
3. Uniformity of appearance	20
4. Absence of cracks and shrinkage	15
	Total 100

HONEY SHOW

Prize ribbons will be awarded to the top six winners in each class.

Class 1* - Three 1-lb. jars of Honey, Extracted, Water White.

Class 2* - Three 1-lb. jars of Honey, Extracted, Light.

Class 3* - Three 1-lb. jars of Honey, Extracted, Light Amber.

Class 4* - Three 1-lb. jars of Honey, Extracted, Amber.

Class 5* - Three 1-lb. jars of Honey, Extracted, Dark.

Class 6 - Three section boxes of Comb Honey, Light.

Class 7 - Three section boxes of Comb Honey, Dark.

Class 8 - Three packages of Cut Comb Honey.

Class 9 - Three 16-oz. jars of Finely Granulated Honey.

Class 10 - Three 16-oz. jars of Chunk Honey.

Class 11 - One shallow super frame of Cut Comb Honey.

Class 12 - One shallow super frame of Extracting Honey.

Class 13 - One full-depth frame of Honey.

Class 14 - Three identical novel shape, Honey filled containers.

Class 15 - One novelty gift box of packaged Honey.

Class 16 - One shadow box or Niche Display of Honey related subject.

Special Rules:

Money. Handling and

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1. Entries in Classes 12, 13 and 14 must be displayed in bee-proof cases having both sides made of transparent glass or plastic.

2. Entries in Classes 7 and 8 must be in window cartons or wrapped individually in transparent plastic.

3. Colors of Honey in Classes 1 thru 7 will be determined by the official grading committee.

4. All entries must be the product of the entrant's apiary and have been produced during the period August 1975 to August 1976.

5. Entries in Classes 1 thru 5 (marked *) must be in Queen Line type glass jars.

Scoring Objectives: Maximum Pts.

- | | |
|--|-----------|
| 1. Density (water content above 18.6 disqualified) | 20 |
| 2. Absence of crystals | 10 |
| 3. Cleanliness: | |
| a. Without lint (7) | |
| b. Without dirt (10) | |
| c. Without wax (7) | |
| d. Without foam (6) | 30 |
| 4. Flavor | |
| (Points will be reduced on OFF FLAVOR HONEY) | |
| 5. Container appearance | |
| Clean and in good condition | 10 |
| | Total 100 |

MEAD SHOW

Prize ribbons will be awarded to the top six winners in each class.

- Class 1 - Mead, Dry.
- Class 2 - Mead, Sweet.
- Class 3 - Mead made with fruit juices.
- Class 4 - Mead, Sparkling, made with or

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without fruit juices.

Scoring Objectives:	Maximum Pts.
1. Clarity	20
2. Color	10
3. Taste	20
4. Body	10
5. Bouquet	20
6. Bottle	10
7. Bottle Closure	10
	Total 100

**HONEY COOKING SHOW
(Non-Professional)**

Prize ribbons will be awarded to the top six winners in each class.

- Class 1 - Cookies, Crisp - 1 dozen.
- Class 2 - Cookies, Soft - 1 dozen
- Class 3 - Bars or Brownies - 1 dozen
- Class 4A - Cake, Unfrosted - 1 cake
- Class 4 B - Cake, Frosted - 1 cake
- Class 5 - Yeast Bread - 1 loaf
- Class 6 - Yeast Bread, Fancy - 1 loaf
- Class 7 - Yeast Rolls - 1 dozen
- Class 8 - Quick Bread (fruit or nuts optional) - 1 loaf
- Class 9 - Muffins (fruit or nuts optional) - 1 dozen
- Class 10 - Candy - ½ lb. or 12 pieces
- Class 11 - Pie (rules apply to filling) - 1 pie

Special Rules:

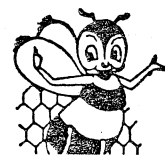
- 1. Entries must be accompanied by the recipe as used, written on 3"x5" cards in triplicate.
- 2. At least 25% of the sweetening used must be Honey.
- 3. No "mix" or prepared sweetened cereal is to be used.
- 4. Entries will be exhibited as received. Plates will not be furnished by the show committee.
- 5. Pie crust will be judged on appearance - i.e., not burned or broken up, etc.

A. Baked Goods

Scoring Objectives:	Maximum Pts.
1. General appearance	20
2. Flavor	35
3. Texture, grain, moisture, uniformity of color	30
4. Lightness	15
	Total 100

B. Candy

Scoring Objectives:	Maximum Pts.
1. Attractive appearance	20
2. Flavor	35
3. Texture	25
4. Handling quality in serving	20
	Total 100



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Total	100

WING SHOW
(Professional)
Awarded to the top six

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**DELAWARE VALLEY COLLEGE
AT NATIONAL BEE MEETING**

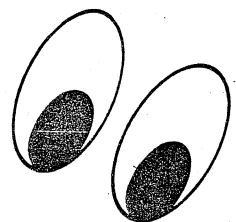
Early this winter, the American Beekeeping Federation held its annual meeting and honey show at the Ben Franklin Hotel in Philadelphia. Mr. Robert Gerberich and Mr. Harold Dambly, president and treasurer respectively, of Delaware Valley College Apiary Society, assisted by Dr. Robert Berthold the club's advisor, set up a well received display entitled "What is Honey?" The first part of the display described how the honeybee gathers nectar from flowers, carries it back to the hive, and converts it into honey. Then was shown how the honey is taken from the bees, extracted, filtered, and bottled for sale. The last part of the display

dealt with the various uses of honey including its use in baked goods, in beverages, in home canning and freezing, and as a table sweetening agent.

The club officers also assisted Dr. Berthold in his duties as Chairman of the American Honey Show. The show included honey entries from all over the United States, and it along with the club's honey display received extensive local television coverage.

During the week, the members of the club along with those students enrolled in Delaware Valley College's course in beekeeping attended the meeting. During the day, they visited the various displays, attended talks presented by leading honey bee scientists from all over the world, and talked informally with the speakers as well as other members of the beekeeping industry.

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"NEW JERSEY TAGS A HONEY"

The Garden State issues a one of a kind courtesy license plate to hobby beekeeper Alan Zoufaly of Watchung, N.J. A long wait for special plates came to an end when the state of New Jersey announced that beginning Jan. 1, 1976, it would follow other states' issuance of specially requested license plates. A very proud plate, indeed, to display for anyone involved in apiculture.

Now with six well-established colonies, Mr. Zoufaly reflects on the importance of starting right with bees. With no local enthusiasts for direction, one seeks the library for instant advice on the subject, regretfully for many, to find the library hasn't purchased a book on beekeeping in 25 years. Where then does one turn for current information and standards in the industry?

New Jersey has the answer with the Department of agriculture, Division of Plant Industry, Trenton, N.J., under the direction of J.C. Matthenius, Jr., Beekeeping Inspector, who has been examining hives and advising beekeepers for over 30 years. With a field crew of three sting-happy assistants, Mr. Matthenius leaves no frame unturned in his aid to those involved in beekeeping.

Beyond this, New Jersey residents have available Dr. Radcliff Roberts, Entomology Professor at Rutgers University, where under his instruction two short summer courses offer advice to both novice and experienced beekeepers. Here, fundamentals are explained from hive assembly to making of mead to the establishment of the two queen colony.

With all of New Jersey's technical aid to those interested in beekeeping, and quality new A.I. Root equipment used from the outset for establishment and manipulation, followed by ABC-XYZ in Bee



Culture as the industry's Bible, the only thing lacking would be a beautiful assistant for assured success. Miss Miller does, indeed, add the finishing touch to making his hobby a most gratifying one and surely proves that "Honey Lovers Stick Together."

THREE DAY COURSE IN ADVANCED BEEKEEPING

Cook College in cooperation with the New Jersey Department of Agriculture offers a 3-day course in beekeeping. The program is designed to provide information for experienced beekeepers. Inexperienced beekeepers are not encouraged to take this course but should consider the course for beginners offered June 28-30.

Program

The course will be given at the Food Science Building Auditorium on the Cook College Campus. Classes will be conducted from 9 a.m. until 4 p.m. Participants will have one hour for lunch.

Topics to be covered include: Commercial pollination; Communication and anatomy of honeybees; Disease control; Honey and wax showing and judging; Honey house design; Making wax

candles and
package bee

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Delaware Va
J.C. Matthenius
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candles and mead; Marketing honey; Producing package bees; Queen rearing.

Teaching Staff

Radcliff Roberts, Rutgers; Robert Berthold, Delaware Valley College of Agriculture and Science; J.C. Matthenius, Jr., supervisor of bee culture, N.J. Department of Agriculture; Walter Wilson and Paul Raybold, N.J. Department of Agriculture.

Certificates

A certificate will be presented on Friday afternoon to those who attend all sessions of the course.

Expenses

College registration, instructional, and miscellaneous fees: N.J. residents - \$20, out-of-state \$21.50.

Fees include mimeographed notes and necessary equipment. A receipt will be available at the first meeting. Registration includes \$1.50 for a 6-month membership in the New Jersey Beekeeping Assn. and a subscription to the monthly association newsletter.

Make check or money order payable to: Rutgers University. The fee must be paid in full before the application will be considered. Your application will not be acknowledged, but your check will be returned if the course is canceled or filled.

Applicants under 16 years of age must secure parental permission and approval of the college staff.

Clothing

Light-colored slacks and shirts or blouses are appropriate for both men and women.

Notebooks

Each student should bring a standard 3-ring binder with an 8½" x 11½" filler for notes. Mimeographed material on 3-hole punch, 8½" x 11" paper will be distributed.

Dormitories

Housing is available in university dormitories. For information write to:

Resident Instruction

Cook College

P.O. Box 231

New Brunswick, N.J. 08903

Send Application Early

Mail your application no later than July 10. Registrations received after the deadline will be considered only if space permits. Inexperienced beekeepers are not encouraged to take this course.

Mail registration bill form to: Mrs. Norma Wanson, Office of Resident Instruction, Cook College, Rutgers University, P.O. Box 231, New Brunswick, N.J. 08903.

Other Programs

Noncredit courses in other subject matter areas are offered by Cook College. For information write to: Dr. Roger R. Locandro, Associate Dean, Cook College, P.O. Box 231, New Brunswick, N.J. 08903.



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a most gratifying one and
Lovers Stick Together."

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hour for lunch.

red include: Commercial
ation and anatomy of
ol; Honey and wax showing
use design; Making wax

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Your nearby Root Dealer will also be glad to give you advice on any beekeeping problem you may have. Stop in and see him soon.

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IMITATION AND ARTIFICIAL HONEY

by DEWEY M. CARON
University of Maryland
College Park, Maryland

Have you ever tasted an artificial or imitation honey?

Beekeeping tasters competing in the Honey Identification Contest at the Annual Maryland Beekeepers Meeting had to determine which sample of 10 unknowns was an imitation honey. Better than half could tell the difference. The two relatively new products, artificial and imitation honey, have created a great deal of concern for beekeepers and have changed honey marketing patterns in a drastic and certainly detrimental fashion.

What are we talking about with this "funny honey"? Why do we need "fake" honey?

In the late 1960's chemists isolated and perfected a technique whereby an enzyme, glucose isomerase, converts glucose to fructose. This development permitted an inexpensive conversion of the inexpensive sugar glucose into the sweet tasting sugar fructose. Isomerized syrups, as they are called, are very similar in chemical and physical properties to honey.

Since isomerized syrups are inexpensive to produce with this new technique, they duplicate honey but at a great deal less expense. Honey is basically a glucose/fructose sugar mixture with 16 to 18.6% water and 1 to 5% other materials prior to heating and filtering. The isomerized syrups are very constant in physical properties, which honey is not. Isomerized syrups compete exceedingly well with other sugar sweeteners because the fructose yields a much higher sweetening factor compared to sweeteners containing just glucose or sucrose (table sugar).

There was some direct competition between isomerized syrups and honey for the supermarket consumers dollar. Isomerized syrups were sold as imitation honey with very misleading and confusing labels. In Maryland while large packer honey sold for 95¢ to \$1.20 per 1 lb. jar (non-health food section), the isomerized syrups, in identical containers competing for the same exceedingly small supermarket shelf space, sold for 69 cents to 85 cents for a 1 lb. jar. Although lacking the natural aroma or varying flavors of honey, the imitation products might have forced honey completely from the sweeteners section of the supermarket to the health food aisle where honey is unrealistically higher priced.

An isomerized syrup could be marketed in some states as "honey". It is possible however to write regulations and to have state legislatures pass such laws that would forbid the debasement of the term honey. An isomerized syrup could not be permitted from being sold but it could be prevented from being labelled as "honey" or from being blended with a natural honey and being sold as

honey or in containers where honey was most prominently displayed. As such products appeared in many EAS states and other states across the U.S. quickly secured such legislation. Today the imitation product has nearly disappeared because enough states have enacted legislation to take the profit from any national food processor marketing such a fake.

Of more concern to the beekeeping industry and of greater impact, has been the sale of isomerized syrups as artificial or adulterated "honey". At present there is a crash program underway to develop chemical tests that will permit the identification of honey separate from adulterated or artificial "honey". Just recently an entire boat load of material labelled "honey" was denied entry into the U.S. because it was not honey. Although the officials initially felt the material was not honey, the standard tests failed to indicate that it was an isomerized syrup. A new test did reveal such a fact but had even a small amount of honey been added to the ship load, this particular test would also have failed. The product was burned to prevent its further sale as "honey".

Artificial "honey", i.e., the isomerized syrups, have displaced a large number of commercial (i.e. bulk) honey markets. This includes food processing, tobacco processing and other industries using honey in their manufacturing and processing. The candy industry will probably go to the cheaper syrups and many bakeries have already done so. These artificial "honey" products have caused a great deal of concern to the beekeeping industry. The isomerized syrups do the same things that honey does but at a good deal less expense. Many commercial outlets for honey have completely disappeared.

We feel greater pressure in our EAS outlets due to the loss of the commercial markets. We have been able to sell out darker honey such as tulip poplar, blackberry, aster, and buckwheat at the same price or at a higher price than our lighter honey. Typically, the commercial markets have used the darker honey of the larger beekeeper. We in the East can now expect some of this honey be pushed toward our markets. An interesting note here is that Sue Bee has recently test marketed darker honey and have had most favorable results. They have up to now blended honey to create their light color uniform pack. They are also encouraged by the sales of the crystallized honey packs. This pack permits the use of darker colored honey.

What does the future hold? Imitation honey for direct consumption is a very poor competitor with honey except in price. Labelling laws should hold back its distribution and prevent the use of the name honey. Adulterated sugar products labelled as

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"honey" will hopefully be detectable using an inexpensive laboratory procedure. Such a technique still must be developed however. The use of a honey substitute in industry will probably continue and further reduce commercial honey outlets. As long as the product is not labelled as honey, there is nothing illegal about its use. Beekeepers should be diligent in insuring that words like artificial "honey" are not permitted by state law to prevent any exploitation of the fine reputation of honey. We need, as always, to work on increasing per capita honey consumption and expand our existing markets.

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Cook College offers a 3-day course in beekeeping in cooperation with the New Jersey Department of Agriculture. The program is designed to provide basic information for beginners and is appropriate for high school science teachers as a means of enriching their classroom instruction. High school students are invited to participate.

Program

This course will be given at Collins Auditorium in Blake Hall on the Cook College Campus. Classes will be conducted from 9 a.m. until 4 p.m. Participants will have 1 hour for lunch.

Participants will be supplied with bee veils and will have the opportunity to participate in all demonstrations. Each lecture will be followed by a field demonstration.

June 28 - Introduction to beekeeping. Natural history of the honeybee colony. Assembling equipment. Viewing established colonies.

June 29 - Installing package bees and swarms. Introducing queens. Manipulating and managing colonies. Bee diseases.

June 30 - N.J. nectar and pollen plants. Beekeeping and pollination. Preparing honey and beeswax for market.

Teaching Staff

Dr. Radclyffe Roberts, Rutgers; Dr. Robert



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Berthold, Delaware Valley College of Agriculture and Science; J.C. Matthenius, Jr., supervisor of bee culture, N.J. Department of Agriculture; Walter Wilson and Paul Raybold, N.J. Department of Agriculture.

Certificates

A certificate will be presented on Friday afternoon to those who attend all sessions of the course.

Expenses

College registration, instructional, and miscellaneous fees: N.J. residents - \$20; out-of-state - \$21.50.

Fees include mimeographed notes and necessary equipment. A receipt will be available at the first meeting.

Make check or money order payable to Rutgers University. For the application to be considered, the fee must be paid in full. Checks will be returned if the course is canceled or filled; otherwise your application will not be acknowledged.

Applicants under 16 years of age must secure parental permission and approval of the college staff.

Clothing

Light-colored slacks and shirts or blouses are appropriate for both men and women. Bee veils will be supplied to all participants.

Notebooks

Each student should bring a standard three-ring binder with 8½" x 11" filler for notes. Mimeographed material on three-punch 8½" x 11" paper will be distributed.

Dormitories

Housing is available in university dormitories. Please write for information: Resident Instruction, Cook College, Rutgers University, P.O. Box 231, New Brunswick, N.J. 08903.

Send Application Early

Mail your application no later than June 10. Registrations received with later postmarks will be considered only if space permits.

Experienced beekeepers are not encouraged to take this course. They should take the 3-day course in Advanced Beekeeping offered July 21 to 23.

Mail registration bill form to: Mrs. Norma Wanson, Office of Resident Instruction, Cook College, Rutgers University, P.O. Box 231, New Brunswick, N.J. 08903.

Other Programs

Noncredit courses in other subject matter areas are offered by Cook College. For information write to: Dr. Roger R. Locandro, Associate Dean, Cook College, Rutgers University, P.O. Box 231, New Brunswick, N.J. 08903.

Bee-ing Communicative

Some people spend lifetimes watching bees. Foremost among them is Karl von Frisch, a professor at the University of Munich who has devoted virtually all of his working years to studying bees and other insects. Last year, Mr. von Frisch received a Nobel Prize for his work; it was the first time the prize was given to an animal behaviorist.

The bees' rigid social work (the females do all the work while the males do nothing but mate with the queen and die soon afterwards) and industry (a bee will make 30,000 trips, averaging up to 800 an hour, to gather enough nectar for a pound of honey) are well documented. But Mr. von Frisch found that bees also have a language facility for communication "which, as far as we know, has no parallel in any other animal."

Specifically, Mr. von Frisch found that a foraging bee can tell others in the hive when she has found food, how much, whether it's near or distant, and if distant how far away and in which direction her fellow workers should fly to find it. She does this by dancing - around in circles if the food is close, or with vigorous tail-wagging and varying rhythms if it's far away. (Bees frequently gather food a mile or more away from the hive.)

Later, a student of Mr. von Frisch's, Martin Lindauer, found that bees - again by dancing to communicate - are able to arrive at a community decision on a new home after they swarm from their existing one (usually because of overcrowding). Those bees who have inspected the best potential sites dance more vigorously than those who have examined mediocre spots; this causes more bees to inspect the site of the excited dancers, and if they agree they will return and dance in an equally vigorous manner. Eventually, a consensus is reached wherein the whole swarm is throbbing with ecstasy and they fly off to their new home. One swarm studied by Mr. Lindauer considered 21 possibilities and took two weeks to decide.

Though the research that led to these discoveries was conducted primarily for its scientific interest, the findings may have significant practical benefits. "When some day in the future food grows scarce," Mr. von Frisch writes, "people . . . should recall that in their own language bees can be aroused to greater industry and can be dispatched . . . in accord with the wishes of the beekeeper and the farmer."

Some scientists have pooh-poohed such findings of what might be called intelligence in these "lower animals," as bees are categorized. But Donald R. Griffin, a biologist at Rockefeller University in New York and an early skeptic himself, duplicated the von Frisch experiments and came up with the same conclusions. Mr. Griffin says: "I am willing to entertain the thought that perhaps the bees know what they are doing."

To the Editor,

On behalf of the people warm welcome to those Apicultural Society Conference Polytechnic Institute and Blacksburg.

Since biblical times, existence has been associated with bees which produce it cited and devotion to purpose.

Both points of view are followed by Apiculture, with small but highly select segments.

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To the Editor,

The Eastern Apicultural Society announce its 22nd Annual Meeting this year will cater to all levels of beekeeping world, beginning with the hobby or profession, going

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LETTERS TO THE EDITOR

To the Editor,

On behalf of the people of Virginia, I extend a warm welcome to those attending the Eastern Apicultural Society Conference at the Virginia Polytechnic Institute and State University in Blacksburg.

Since biblical times, the ultimate in human existence has been associated with honey, and the bees which produce it cited as examples of industry and devotion to purpose.

Both points of view are well known to the followers of Apiculture, who themselves form a small but highly select segment of our economy.

As they assemble in Blacksburg, Va., I hope they will find time to visit some of our historic shrines in which Virginia abounds and to enjoy the scenic and recreational opportunities that grace the state in such abundance and variety.

Mills E. Godwin, Jr.
Governor

To the Editor,

The Eastern Apicultural Society would like to announce its 22nd Annual Meeting. Our meeting this year will cater to all levels of interest in the beekeeping world, beginning with those new-comers to the hobby or profession, going all the way through

and including those engaged in the scientific and research end of apiculture. There will be demonstrations and lectures for everyone depending upon the level of interest and the level of experience. This year's EAS Meeting will be held in Blacksburg, Va., at the Virginia Polytechnic Institute and State University. There will be an excellent opportunity for conferees to attend the EAS Meeting in combination with a Bicentennial visit to Virginia's Williamsburg.

The officers and directors of the Eastern Apicultural Society would like to extend an invitation to any beekeepers who are interested to join us in Blacksburg.

The Eastern Apicultural Society comprises 14 states and Ontario, Canada; however, attendance at the meeting is not limited to residents of these states and province only but is open to any interested beekeeper.

We welcome one and all to join us and for further information, please contact:
Mr. Homer P. Powers, President
203 N. Governor St.
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Respectfully,
John Rucker Jones, Jr.
Vice President

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BIOLOGY PROF TAKES STING OUT OF KILLER BEE TALES

A University of Notre Dame biology professor says those stories about South American killer bees headed for the United States are a lot of bunk.

Dr. Harold Esch said sensational reports of vicious Brazil-based African bees moving north are caused mostly by Brazilians who discover the foreign bees have stingers.

"It's more a problem of the attitude of people rather than attitude of the bees themselves," he said.

Esch explained that bees native to Brazil are stingless so Indians have become used to breaking open a nest to remove the honey without fear of being stung. Then they meet the African bees or those from other imported strains with stingers.

"The problem in Brazil is that people who have read reports about killer bees get fearful and they start trying really dumb things to eradicate them," he said.

He said Brazilians use hammers, axes -- even flamethrowers -- to get rid of the bees.

"The bees react to this treatment and sting people and the whole thing goes in a vicious cycle, creating new stories about killer bees."

Esch said he didn't find the African bees any more aggressive than those in Europe or North America.

African bees have been imported and crossed with United States strains for years, Esch said.

"A Michigan beekeeper imported a tremendous number of African queens. If Africanization produces super aggressive bees we should have been

receiving reports of attacks by killer bees in southern Michigan and northern Indiana."

Esch has traveled to South America several times in the past 10 years and says he never saw an incident involving attacking bees.

In 1964, Esch's wife worked in an area containing up to 50 hives of the so-called killer bees and was not attacked, nor even stung, he said.

While he dismissed the scare stories about the African bees, Esch said they can be dangerous if not handled properly and Brazilians may well consider the bees vicious.

"If you are allergic to bee stings, one sting can be enough to kill you if you do not receive proper care immediately," Esch said, adding that a high percentage of Brazilians may be allergic to bee venom because they are not used to it from native bees.

Perhaps as many as 100 Brazilians die from bee stings in a year, fewer than the 200-300 bee sting deaths that go largely unreported each year in the United States, he said.

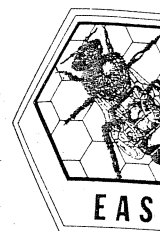
Esch said all the killer bees in South America are supposedly descended from 26 queens of the African strain that escaped near Sao Paulo, Brazil, in 1957. But by the simple rules of genetics, he said, any aggressive tendency should be getting weaker in succeeding generations.

"Twenty-six queens is not very many at all compared with the numbers that have been imported into the U.S. from Africa," he said.

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