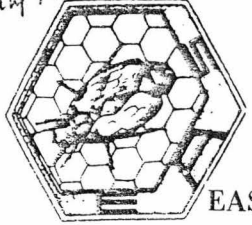


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EAS JOURNAL

EASTERN APICULTURAL SOCIETY OF NORTH AMERICA, INC.

1974 CONFERENCE ISSUE - JULY, 1974

PROPOSED PROGRAM FOR 1974 APICULTURAL SOCIETY CONFERENCE AT GUELPH, ONTARIO

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WEDNESDAY - AUGUST 7th

- 1:30 P.M. Registration - Main Lobby - Lambton Hall
- 2:00 P.M. Professional Apiculturists; Location - to be determined.
- 3:00 - 5:00 P.M. Delegates Meeting-Games Room - Lambton Hall
- 5:00 - 6:00 P.M. Social Hour - Cash Bar - Gryphon Room
- 6:00 P.M. Dinner - Creelman Hall
- 7:30 - 9:30 P.M. E.A.S. Directors Meeting - Games Room - Lambton Hall
- 7:30 - 9:30 P.M. Films - Lounge - Lambton Hall
- 9:30 - 11:30 P.M. Wine and Cheese Reception - Creelman Hall

THURSDAY - AUGUST 8th

- 7:30 A.M. Breakfast - Creelman Hall
- 9:00 A.M. Call 20th Conference to order; Welcome to University of Guelph by Dean of Ontario Agricultural College; Welcome to Ontario - Minister of Agriculture - Memorial Hall
- 9:30 A.M. Beekeeping in Canada - by Prof. Phil W. Burke
- 10:15 A.M. Coffee Break - War Memorial Lounge (lawn - Weather wise)
- 10:30 A.M. Apicultural Research in Canada - Dr. J.J. Cartier; Ottawa - Memorial Hall
- 11:00 A.M. Black Locust as a Honey Plant - Prof. Gord Townsend
- 11:30 A.M. Dr. Marshall Levin - U.S.D.A. Beltsville, Maryland
- 12:00 Noon Lunch - Creelman Hall
- 12 Noon - 2:00 P.M. Ladies Luncheon - MacDonald Hall
- 1:45 P.M. Busses Leave for: Oliver Clubine Beesupplies Plant and Alexander Graham Bell Home, Brantford, Ontario
- All Day Exhibits - Lambton Hall - Games Room
- 5:15 P.M. Busses leave Brantford for Guelph Campus
- 7:00 P.M. Barbeque (chicken) - Creelman Green
- 8:30 P.M. - 11:00 P.M. Evening Program - Ontario and Canada Travelogue - War Memorial Hall
- to 11:00 P.M. Coffee Shop Open

FRIDAY - AUGUST 9th

- 7:30 A.M. Breakfast - Creelman Hall
- 9:00 A.M. Call to Order - War Memorial Hall
- 9:05 A.M. Nectar Secretion - Dr. Reg. Shuel - University of Guelph
- 9:30 A.M. Nutrition of Honey Bees - Dr. Jim Nation, Florida.
- 10:00 A.M. Bee Diseases - Chalk Brood - Dr. Tom Gochnauer - Ottawa
- 10:30 A.M. Coffee Break (weather permitting - on the lawn) - War Memorial Lounge

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CLASS PRIVILEGE
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1974 APICULTURAL SOCIETY CONFERENCE

(continued from page 1)

10:45 A.M. To be announced
 11:15 A.M. Annual Business Meeting of E.A.S. - War Memorial Hall
 12:00 Noon Lunch - Creelman Hall
 1:30 P.M. To be announced
 2:00 P.M. Tour Apicultural Field Lab. - buses and private automobiles
 2:45 P.M. Apiary Demonstration by Al Adie and Apiary Staff
 4:45 P.M. Return to Lambton Hall
 6:15 P.M. Social Hour - Creelman Hall
 7:15 P.M. Annual Banquet - Creelman Dining Hall
 8:30 P.M. Presentation of Awards
 9:30 P.M. Entertainment

SATURDAY, AUGUST 10th

7:30 A.M. Breakfast - Creelman Hall
 9:00 A.M. Call to order - War Memorial Hall
 9:05 A.M. Michigan State - Bert Martin
 9:30 A.M. Beekeeping in Kenya - East Africa - Dr. Morris Smith
 10:00 A.M. Dr. Togy Johannsen - New York
 10:30 A.M. Coffee Break - War Memorial Lounge
 10:45 A.M. to be confirmed
 11:15 A.M. What makes a queen - Dr. S. Dixon - University of Guelph - War Memorial Hall
 12:00 Noon Lunch - Creelman Hall
 1:00 P.M. Checkout and departure - Lambton Lobby

A special invitation is extended to all those wishing to attend the summer meeting of the Ontario Beekeepers Association starting at 1:00 P.M. at Guelph, Ontario.



EAS JOURNAL Eastern Apicultural Society of North America, Inc.

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 Scarborough, Ontario M-1M-2X1, Canada
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 Toronto, Ontario M4G-2M1, Canada
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 Central Connecticut State College
 New Britain, Connecticut 06050
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 109 No. Feltus Street
 South Amboy, N. J. 08879

Published Monthly at 109 No. Feltus St., South Amboy, N. J.
 Second Class Privilege applied for.

E.A.S. Journal \$2.00; Member \$3.00*; Joint Membership \$4.00*; Family Membership \$6.00*; Commercial Membership \$50.00*; Life Membership \$100.00*; Association Membership \$25.00*.

*Of which \$2.00 is subscription to Journal.
 Vol. 2, No. 5, July, 1974

DR. NORMAN E. GARY RECEIVES J. I. HAMBLETON AWARD FOR 1974

Dr. Norman E. Gary, professor of apiculture at the University of California at Davis, has been chosen as the 1974 recipient of the J. I. Hambleton Award for outstanding research in apiculture in North America. The award will be presented to him at the annual meeting of the Eastern Apicultural Society of North America, August 7-10 at Guelph, Canada. Dr. Gary, at that time, will present the J. I. Hambleton honorary lecture.

Dr. Gary has specialized in research on the behavior of honey bees in order to develop new information that would enhance the utilization of honey bees for pollination and honey production. Much of his research has concerned the flight range and distribution of drones and queen bees on mating flights, and this has developed a better understanding of possible methods to regulate the breeding. His most recent research deals with studies of foraging activities of honey bees, particularly the flight range distribution and preference of certain crops by honey bees. This work is basic to understanding some of the problems dealing with pollination of agricultural crops.

In addition to research activities, Dr. Gary has made several films on honey bees and their biology. He also teaches courses in apiculture and insect behavior in the department of Entomology. He is a

(continued on page 8)

Figure 1. Apparatus for measuring the area of glass.

Al-Tickrity, Hillm reviewed methods of proposed one using a sliding vertical rule the brood area was made, and the area covered used a direct method Harlow's (1932) method of a queenbee. He transferred, and transferred a piece of tracing paper. We modified the mounted on a tripod to of glass (Fig. 1). An outline patches of brood was sheet of clear acetate covered later copied on tracing record. A different color to make it easy to study building, brood rearing, cleaned with soap and recordings. As there was days when the weather was not flying. A frame covered each side traced and the disturbance of the colony the bees.

The brood areas recorded tracing paper were measured with a planimeter. This is an instrument that can be moved around the shape whose area is recorded. Readings are convertible to measurement desired. The bees themselves did not provide

DIRECT MEASUREMENT OF COMB AREA WITH A PLANIMETER

by T.S. K. and M. P. Johansson
Flushing, New York

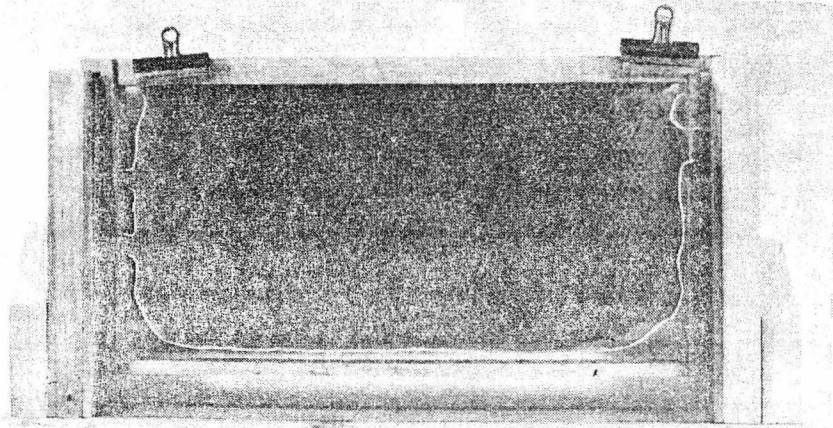


Figure 1. Apparatus used for measuring comb. The white outline of the comb was traced on a sheet of acetate clipped to the pane of glass in front of the comb.

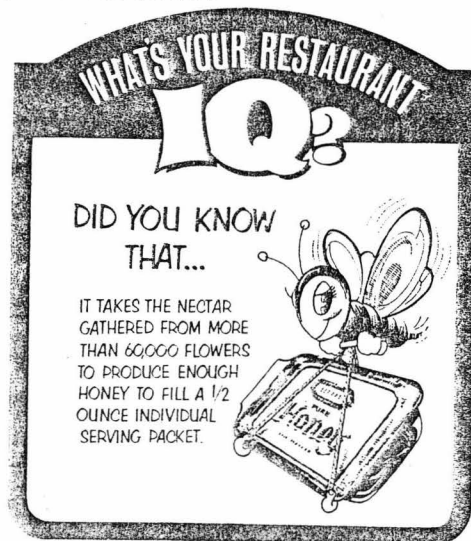
Al-Tickrity, Hillman, Benton, and Clarke (1971) reviewed methods of measuring comb area and proposed one using a stationary horizontal ruler and a sliding vertical ruler. The breadth and height of the brood area was measured, a count of empty cells made, and the area calculated by formula. We have used a direct method of measurement based on Harlow's (1932) method for tracing the "rambles" of a queenbee. He traced on glass with a paraffin pencil, and transferred the record by pressing a piece of tracing paper against the glass.

We modified this by using an apparatus mounted on a tripod to hold a frame behind a piece of glass (Fig. 1). An outline of the comb profile and patches of brood was traced with wax pencil on a sheet of clear acetate clipped against the glass, and later copied on tracing paper for a permanent record. A different color was used for each recording to make it easy to study the progress of comb building, brood rearing, etc. The acetate sheets were cleaned with soap and water for the next set of recordings. As there was no need to estimate empty cells, the work was done quickly -- a blessing on days when the weather was poor and the bees were not flying. A frame could be taken from the hive, each side traced and the frame returned with little disturbance of the colony and without brushing off the bees.

The brood areas recorded on the sheets of tracing paper were measured directly with a planimeter. This is an instrument with wheels that can be moved around the boundary of an irregular shape whose area is recorded on dials. The dial readings are convertible into any linear units of measurement desired. The acetate sheets themselves did not provide sufficient friction to

obtain accurate measurements. A grid of squares used to measure the comb outlines came within 1 percent of the planimeter method but required discretion to estimate the fraction of squares along the edge and was wasteful of time and effort.

The use of this direct method makes it possible to measure scattered and irregular patches of brood easily and recording the traces in the apiary can be done by a single person when help is not available. The investment in a planimeter (\$65 in 1961) is well worth the cost as a means of saving time, manpower and anxiety about getting accurate results. Even if a planimeter is not used, recording the comb outlines for measurements at a later time is an advantage when permanent records for future reference are desirable.



SHOW RULES OUTLINED FOR E. A. S. ANNUAL CONFERENCE

GENERAL RULES FOR ALL SHOWS

1. All entrants must be registered with the Society and have paid the registration fee regardless of whether or not they attend the Conference.
2. Only one entry may be made in each class by any one family.
3. No identifying labels on any entry.

GADGET SHOW

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

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

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

Class 3 - Small miscellaneous items

Class 4 - Non-competitive exhibit (no prize)

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

Score Points:	Maximum
1. Explanatory text	25 points
2. Practicality	50 points
3. Ease of reproduction	15 points
4. Help to beekeeping	10 points
	100 points

BEESWAX SHOW

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

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

Class 2 - Pair of pure Beeswax candles, dipped.

Class 3 - Pair of pure Beeswax candles, molded.

Class 4 - Pair of pure Beeswax candles, fancy.

Class 5 - Novelty candles containing Beeswax (6 assorted).

Class 6 - Novelty Beeswax (additives permitted).

Special Rules:

1. All entries in Class 1 should be covered with clear 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 be produced by the exhibitor.

Score Points:	Maximum
1. Cleanliness	35 points
2. Color and aroma	30 points
3. Uniformity of appearance	20 points
4. Freedom from crackage and shrinkage	15 points
	100 points

HONEY SHOW

Prize ribbons will be awarded to the top six

winners in each class.

Class 1* - 3 1 lb. jars Water White Extracted Honey

Class 2* - 3 1 lb. jars Extracted Honey

Class 3 - 3 1 lb. jars Extra Amber Extracted Honey

Class 4* - 3 1 lb. jars Light Amber Honey

Class 5* - 3 1 lb jars Amber Extracted Honey

Class 6* - 3 1 lb. jars Dark Extracted Honey

Class 7 - 3 sections of Light Comb Honey

Class 8 - 3 sections of Dark Comb Honey

Class 9 - 3 cobana sections Light Comb Honey

Class 10 - 3 cobana sections Dark Comb Honey

Class 11 - 3 sections of Cut Comb Honey

Class 12 - 3 jars Finely Granulated Honey (16 oz. jars)

Class 13 - 3 jars Chunk Honey (1 lb.)

Class 14 - Cut Comb Frame of Honey (no wires)

Class 15 - Shallow Extracting Frame of Honey

Class 16 - Full Depth Extracting Frame of Honey

Class 17 - 3 Novel Shaped Containers filled with honey (3 identical shaped containers)

Class 18 - Novelty Gift Box filled with Honey

Class 19 - Shadow Box or Niche Display of Honey

*Queen Line Glass Jars only in Classes 1-6.

Special Rules:

1. All jars must contain one pound of honey unless otherwise stated.

2. Frames must be wrapped in clear cellophane or plastic, or be placed in holders furnished by the entrant, and have glass on both sides.

3. Section comb must be wrapped in clear cellophane or be in window cartons.

4. Color will be determined at the time of entry by the official grading committee.

5. All entries must be the product of the entrant and must have been produced during the period August 72-August - 73.

Score Points:	Maximum
1. Density (water content above 18.6 disqualified)	20 points
2. Freedom from crystals	10 points
3. Cleanliness - lack of:	
a. Lint (7)	
b. Dirt (10)	
c. (Wax (7)	
d. Foam (6)	30 points
4. Flavor	
Absence of, off flavor, over-heating, fermentation	30 points
5. Container appearance	
Cleanliness and neatness	10 points
	Total 100 points

HONEY COOKING SHOW (Nonprofessional)

Prize ribbons will be awarded to the top six

winners in
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2. Flavor
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Name (last)
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winners in each class.

- Class 1 - Cookies, crisp - 1 dozen
- Class 2 - Cookies, soft - 1 dozen
- Class 3 - Bars or Brownies - 1 dozen
- Class 4 - Cake - 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 pound 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" x 5" cards in triplicate.

2. At least 25 percent 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 available at the show.

Score Points	Maximum
A. Baked Goods	
1. General appearance	20 points
2. Flavor	35 points
3. Texture, grain, moisture, uniformity of Color	30 points
4. Lightness	15 points
Total	100 points

B. Candy	
1. Attractive appearance	20 points
2. Flavor	35 points
3. Texture	25 points

4. Handling quality in serving 20 points
Total 100 points

*Sweepstakes and bowl prizes will be awarded to the entrants with the greatest total number of points (points; Firsts - 10, Seconds - 6, Thirds - 4, Fourths - 3, fifths - 2, and sixths - 1).

PROFESSIONAL HONEY COOKING

Exhibits of professional honey cooking are invited. Prizes will not be awarded.

Those wishing to display collections of one kind or another may do so. Security of the exhibit will be the responsibility of the exhibitor. No selling or merchandise will be permitted without prior approval of the E.A.S. President.

The full conference fee of \$74.20 (U.S.) per person (double occupancy) or \$80.20 per person (single) will be payable with registration. There will be a minor charge for side trip(s). Checks should be made payable to Eastern Apicultural Society.

The Conference fee includes housing Wednesday, Thursday, and Friday nights; all meals beginning with dinner on Wednesday and ending with lunch on Saturday; this includes a barbecue on Thursday evening, a ladies luncheon and a banquet on Friday evening.

Please return this registration form to:
Thomas E. Raney
Secretary-Treasurer
Cornwall Bridge Road
Sharon, Connecticut 06069
Phone (203) 364-5280

REGISTRATION FORM

20th Annual Eastern Apicultural Society Conference
University of Guelph
Guelph Ontario, Canada
August 7-10, 1974

Name (last) _____ (first) _____
(please print)

Street Address _____ Telephone No. _____
(please include area code)

City _____ State _____ Zip Code _____

() My husband/wife _____ will accompany me.
(give name, surname)

Number of adults _____

Date _____ Amount Enclosed \$ _____

CONDITIONS FOR COMPETITION ENTRIES IN GUELPH

Shortly after his return from the wild, wonderful West Virginia Conference last summer, our Ontario Director, Ross Hopkins, started making arrangements so that E.A.S. members from the United States could bring their competition entries to Guelph. He has received approval from the federal and provincial ministries concerned, subject to the following conditions:

(a) Gadgets -

The Federal Ministry of National Revenue (Customs) requires that new beekeeping gadgets in the possession of conference delegates entering Canada from the United States be 'documented on the appropriate permit' and has advised that 'on this occasion there will be no Customs assessment. On leaving Canada these temporary entry permits should be surrendered to Canadian Customs at the port of exit for cancellation'. No used equipment can be brought in.

(b) Honey and Beeswax -

From the Offices of the Minister of National Revenue notification was sent to Collectors of Customs and Excise that both honey and beeswax for our competitions will be allowed entry on a duty and tax free basis. Agriculture Canada shares jurisdiction over these items and has advised that 'there are no import restrictions with respect to individual sample or gift shipments of honey that have a value not exceeding \$25.00'.

This ministry is also prepared to waive the requirements for standard sizes of containers and label markings, provided that the honey will not be offered for retail sale in Canada. Beeswax must have been liquified, and a statement to that effect is all that is required.

(c) Honey Wine -

National Revenue advises that 'honey wine is governed by the Importation of Intoxicating Liquors Act' and the 'Non-Resident's Automobile and Baggage Regulations allow visitors entering Canada to have alcoholic beverages in their possession, provided the quantity is not in excess of 40 ounces per adult person.' The provinces share this jurisdiction. Quebec has no laws preventing the transporting of homemade wines, but Ontario does. Our strange and antiquated legislation (now being revised) permits us to carry cases of commercial wines, beers and liquors in the trunk of a car or the back of a station-wagon, but forbids the transportation of one bottle of homemade wine!

However, for the purposes of amateur competitions special dispensation is granted by the Liquor Control Board of Ontario, but rules are laid down that we must adhere to.

Winemakers must complete the Honey Wine Competition Entry Form and mail it to our President Hugh MacLeod. He will send the competition tie tags which, affixed to the bottles, will be recognized

as your authority to transport competition wine in Ontario.

One of Canada's National Wine Judges, Mr. David Nicholls of Toronto, has agreed to judge our honey wines. He is familiar with L.C.B.O. requirements and has offered to discuss them with the University staff and ensure that we remain a law-abiding group.

Mr. Nicholls recently taught a course in wine judging in Ottawa and has generously agreed to answer questions about wines and wine judging and might be persuaded to speak to us.

Because the wines will be judged under international rules, we were forced to change the classifications.

Class 1 - Table Wines vary from light to full bodied (although white table wines are rarely full bodied), dry to no more than medium dry, and contain from 10 to 12 percent alcohol. They are used with the main portion of a meal.

Class 2 - Social Wines are usually less strong and less sweet than after dinner wines and should be full flavoured. They could be served with cakes in the afternoon.

Class 3 - After Dinner Wines are heavy bodied and sweet. They are high in alcohol and often fortified. Wines should be in 25 to 26 oz. Clear, colourless round bottles with a screw top (no corks).

The division of the 100 point total is: 60 for quality, 25 for bouquet, 10 for clarity, 5 for colour.

Only the wine will be judged. There are no marks for either the bottles or the labels. In fact, there should be NO labels.

Family illnesses delayed the publication of this information and your reporter apologizes.



EASTERN APICULTURAL SOCIETY

Guelph, Canada
August 7-8-9-10

ALL FOUR DAYS

Single Room - \$80.20
Double Room - \$148.40

PER DAY

	SINGLE	DOUBLE
Wednesday	\$21.50	\$39.00
Thursday	\$28.50	\$53.00
Friday	\$28.50	\$53.00
Saturday	\$16.00	\$28.00

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ENTRY FORM
HONEY WINE COMPETITION

Date: _____

Check against the class(es) you wish to enter.

CLASS	Check
1. Table Wine	_____
2. Social Wine	_____
3. After Dinner Wine	_____

Please note: Each exhibitor may make **only one entry** in each class.

Competitor's Name _____

Address _____

City: _____ State or Province _____

Zip or Postal Code _____

Mail this entry form to:

**Hugh J. MacLeod, President
Eastern Apicultural Society
8 Faircroft Blvd.
Scarborough, Ontario
M1M 2X1**

on or before July 15, 1974

You will receive by mail an appropriate tie tag which must be affixed to each entry.

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APICULTURAL SOCIETY
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SINGLE	DOUBLE
\$21.50	\$39.00
\$28.50	\$53.00
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A SIMPLE SIFTER FOR LABORATORY USE

by T. S. K. Johansson
Department of Biology
Queens College
Flushing, New York 11367

A sifter devised for separating stages of the Confused Flour Beetle, *Tribolium confusum*, is illustrated in Fig. 1. It utilizes readily available materials and can be adapted for sifting and separating various substances. It is made from fruit jars of the type which has a glass lid fitting over a rubber ring and held fast by a metal band (Ball or Kerr glass top Mason jars).

In making the sifter, two of the metal rings were placed in a vise with their tops in juxtaposition and the space between them sealed with solder to form a joint (4). The innermost portion of the joint remained unfilled and was sealed with plastic wood to prevent entrance of media and insects. Sifting screens were made by cementing silk bolting cloth, used for milling or stencil purposes, between two jar rubbers which fit on top of a jar (3).

Fig. 1 shows an assembled unit (1) and the separate parts (2-5). The rubber ring on top of the receiving jar (5) may be used to seal it to the soldered metal bands. When sifting is completed the lower jar is detached first. Then the top jar and sifting screen are disassembled and the desired stage or stages removed from the screen with a camel's hair brush.

There are three sizes of bolting cloth, among the many available, which are useful in separating the stages of *Tribolium confusum*. Eggs and all larvae go through size 000 (22 mesh), while adults and pupae are retained by it. Eggs and most of the larvae are collected on number 3 (56 mesh) bolting cloth so it is not possible to separate eggs from young larvae. To retain and collect first instar larvae, it is necessary to use a number 9 (95 mesh) cloth.

The process of sifting is done most efficiently when the developing instars are of the same age and

the various stages are not mixed. Eggs will be of approximately one age when adults are placed in flour for a few hours and then sifted out. Hatching, pupation and emergence will then occur at about the same time for all individuals in the culture. No injury to the different stages has been noted.

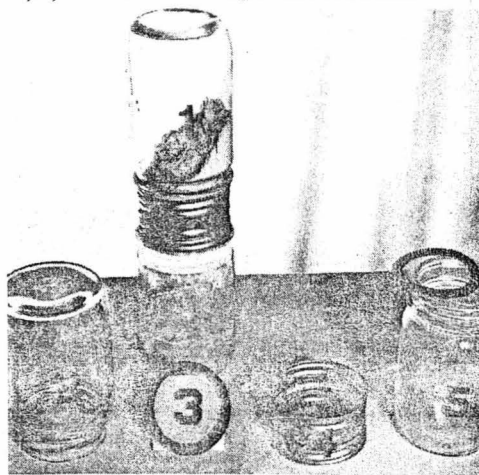


Fig. 1

HAMBLETON AWARD--

(continued from page 2)

member of many scientific organizations and is one of three professors who comprise the research staff of the unique Bee Biology Facility, located at the University of California at Davis.

He was a member of a National Research Council team of scientists sent to Brazil during the fall of 1971 to study the African bee in order to evaluate its potential threat to United States Agriculture and to public health.

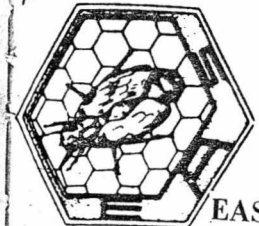
Dr. Gary is the author of approximately 40 articles and papers published in beekeeping and various scientific journals.

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Ardent supporter
plants, animals and h
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