

THE ASA M SENSOR

Volume 2, Number 3

July 1992

THE QUARTERLY NEWSLETTER OF THE
AMERICAN SOCIETY OF ANESTHESIA TECHNOLOGISTS AND TECHNICIANS

President's Message ...

by Dennis McMahon

It may come as a surprise to some that the root word for "technology" or "technician" is the greek word for *art*, in the sense that an art is the application of knowledge for a specific purpose. We are all, in a sense, artists in that we apply our knowledge for the purposes of patient care. That knowledge, especially in medical technology, needs to be maintained if we are to serve our role in supporting anesthesia care.

There are a number of opportunities on the horizon this year to enhance our knowledge. Besides the educational meetings planned by the many regional anesthesia tech societies, several courses are being offered that cover our technology more broadly. In mid-September, a course is being offered at Baylor University in Dallas. Also in Dallas, the Association for the Advancement of Medical Instrumentation (AAMI) is offering its twice-annual anesthesia machine workshop, in late September. And monthly, the Ohmeda Corp is now holding a three-day course in Madison, WI on anesthesia delivery systems.

As if these weren't enough, our own ASATT Annual Educational Program is scheduled for October 17 & 18 in New Orleans, with the option of attending the concurrent ASA meeting and exhibit. Besides being geographically more accessible to most of the membership than past annual meetings, our meeting this year will accommodate a greater

attendance. In addition to lectures on pertinent topics, there will be workshops on the use and care of specific equipment. We will also have a booth at the ASA exhibit area, for which we need volunteers. If you can spare a few hours to represent your Society at the booth, contact Chris Patterson of Region 6. We are also soliciting candidates for the first annual Jami Blue Award, to be presented at this year's meeting. Nominees should be those who have made a significant contribution in the past year to the educational improvement of anesthesia support personnel. If you know of someone who qualifies, call-in your nomination to the Society 800-number.

By now all members should have received the Suggested Reading List as an addendum to the ASATT Training Guidelines. The list will be a continuing work in progress, and your suggestions for deletions or additions to it are welcome. Some of the listed books may be easier to find than others, depending on your employment setting and your own initiative. The idea is to know what references are out there with which to enhance our training. Ultimately, it's up to us individually to improve our skills. Toward that end, a committee is being formed from within our ranks to develop a voluntary self-exam in anesthesia technology, so that we can individually assess where our strengths and weaknesses are in our knowledge base. If you would like to contribute to this exam, give me a call. As our membership

passes 600 this month, it is essential that we have input from a larger proportion of our community.

Finally, it's election time already! Ballots for the position of your regional director and for vice-president/president-elect will be mailed this month. Read your ballot information when you receive it, and **VOTE!** This is your society, and its future will be determined in large part by your response to the elections. Voting is an art, too.



SEE PAGE 4 !!!

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202 745-2015

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800-352-3575

TECHNICALLY SPEAKING ...

by Wes Simpson II, San Diego, CA

Oftentimes a minor modification in a time-tested technique yields major benefits. This issue of Technically Speaking focuses on some of these modifications, as well as recent safety updates.

Valentine DD, *et al*: Distribution of ventilation and perfusion with different modes of mechanical ventilation. *Am Rev Respir Dis*, 143:1262-1266, 1991.

This study was designed to determine the efficiency of pulmonary gas exchange and to estimate the relative distributions of ventilation and perfusion during synchronized intermittent mandatory ventilation (SIMV), pressure support ventilation (PSV), and airway pressure release ventilation (APRV) modes. Data showed no difference in hemodynamics among the three ventilation modes. The study did not address differences in clinical conditions such as hypovolemia, or increased risk of barotrauma or hypoxia in critically ill patients.

Brochard L, *et al*: Constant flow insufflation prevents arterial oxygen desaturation during endotracheal suctioning. *Am Rev Respir Dis*, 144:395-400, 1992.

This study explores the feasibility of using continuous flow insufflation during endotracheal suctioning as a means to prevent desaturation. The technique prevents or minimized significant decreases in arterial oxygenation and prevented a fall in lung volume. This may prove to be a safe, simple way to prevent desaturation in at-risk patients during suctioning. It may also prove useful during other apneic periods such as fiberoptic intubations and placement of endobronchial tubes.

Gaughan SD, Benumof JL, & Ozaki, GT: Quantification of the jet function of a jet stylet. *Anesth Analg*, 74:580-585, 1992.

The use of a jet stylet as an additional safety measure during tracheal extubation or reintubation has been described. This study evaluates the tidal volumes achieved using three different sizes of the Sheridan Endotracheal tube changer.

Essig KE, Freeman JA, & Wilks DH: Alternative bronchial cuff inflation technique for the Univent tube. *Anesthesiology*, 76:478-479, 1992.

This letter describes the use of an end-tidal CO2 monitor to determine the initial seal point of the blocker cuff of a Univent tube. The monitor sample tubing is attached to the lumen of the blocker tube. Initial readings when the blocker cuff is deflated show a typical CO2 waveform. As the blocker cuff is inflated, the waveform abruptly ceases, indicating that lung isolation has occurred. CO2 concentrations remain near the end-tidal peak value until the lung collapses, then rapidly declines.

Shantha TR: Retrograde intubation using the subcricoid region. *Brit Journ Anesth*, 68:102-112, 1992.

This well illustrated article describes a modification to the retrograde intubation technique which may minimize potential complications by use of a subcricoid vs cricoid approach.

Nimmagadda UR, *et al*: Positive end-expiratory pressure increases intraocular pressure in cats. *Crit Care Med*, 19:796-800, 1991.

This study concludes that while pressure elevations caused by PEEP of up to 15cm of H2O may not be relevant in patients with normal pressures and intact globes, damage may occur in patients who have increased pressures of damaged globes.

Wegrzynowicz ES, *et al*: Airway fire during jet ventilation for laser excision of vocal cord papillomata. *Anesthesiology*, 76:468-469, 1992.

This case report describes an airway fire which occurred while using a jet ventilator during rigid bronchoscopy with vocal cord excision by CO2 laser. The laser beam struck the surgeon's glove, vaporizing and igniting it. The jet stream carried the fire into the patient's mouth and nose, igniting his mustache. This fire occurred despite "standard precautions" being taken. The lowest inspired oxygen concentration which will maintain desired SpO2 levels should be used. Nitrous oxide should not be used as the balance gas, as it supports combustion.

Berman MF: The susceptibility of thermistor-based esophageal temperature probes to errors caused by electrically conductive fluids ("artificial saliva"). *J Clin Monit*, 8:107-110, 1992.

This study tested several brands of stethoscopes with built-in thermistor probes, and the potential for error caused by secretions in contact with the probe-to-monitor cable junction. Discusses ways to minimize or eliminate the potential for faulty temperature readings. Results can also be applied to other types of temperature probes, as the connections are the same.

Block, FE & McDonald JS: Sidestream vs mainstream carbon dioxide analyzers. *J Clin Monit*, 8:139-141, 1992.

Using a "Consumer Digest" approach, this article compares the advantages and disadvantages of both sampling techniques, allowing the reader to make an educated choice in the clinical setting.

ECRI: Laser-resistant tracheal tubes. *Technology for Anesthesia*, 12,8:1-5, February 1992.

This update article (first article published in September 1990) describes recent changes in laser-resistant tracheal tubes (LRTT) and examines current issues surrounding LRTT technology and use.

ECRI: Understanding the fire hazard. *Technology for Anesthesia*, 12,9:1-6, March 1992.

This article discusses the basic physiology of fires in the operating room, and discusses techniques for preventing, preparing for, and managing surgical fires.

AAMI

presents

Two

Intensive

Seminars

for

Technicians

Support of Anesthesia

Delivery Systems

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Increase your knowledge and skills while broadening your professional horizons. This is innovative educational programming at its finest. Call today! 1-800-332-2264, ext. 260 to register or for more information.

Association for the Advancement of Medical Instrumentation

"SCIENTIFIC and PRACTICAL ASPECTS of ANESTHESIA for ANESTHESIA TECHNICIANS and TECHNICAL SPECIALISTS"

At
**THE SOUTHLAND CENTER HOTEL
DALLAS, TEXAS**

SEPTEMBER 14-19, 1992

ADDITIONAL INFORMATION: contact Brenda McCloud @ (214) 820-1300

An Intensive 5-Day Course Covering:

- > Cellular function, blood chemistry & dynamics
- > The heart & vascular system
- > Vascular drugs, & the pulmonary system
- > The anesthesia delivery system
- > Monitoring, anesthetic emergencies, etc.

Course Director:

- > A. Wm. Paulsen, MMSc, PhD, CCE

Faculty of the Baylor University Medical Center

Guest Faculty:

- > Wesley T. Frazier, MD
- Emory University, Atlanta
- > B. Roy Simpson, MD
- Baylor University, Dallas

Ohmeda



A BOC Health Care
Company
Critical Care
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Ohmeda offers a seminar for Anesthesia Technicians

Course:

Operation and Maintenance of Anesthesia Equipment

Class includes lecture and hands-on training in basic operation, maintenance, and minor repair for the following:

- Anesthesia Machines
- Absorbers
- Ventilators
- Built-in monitors for anesthesia machines

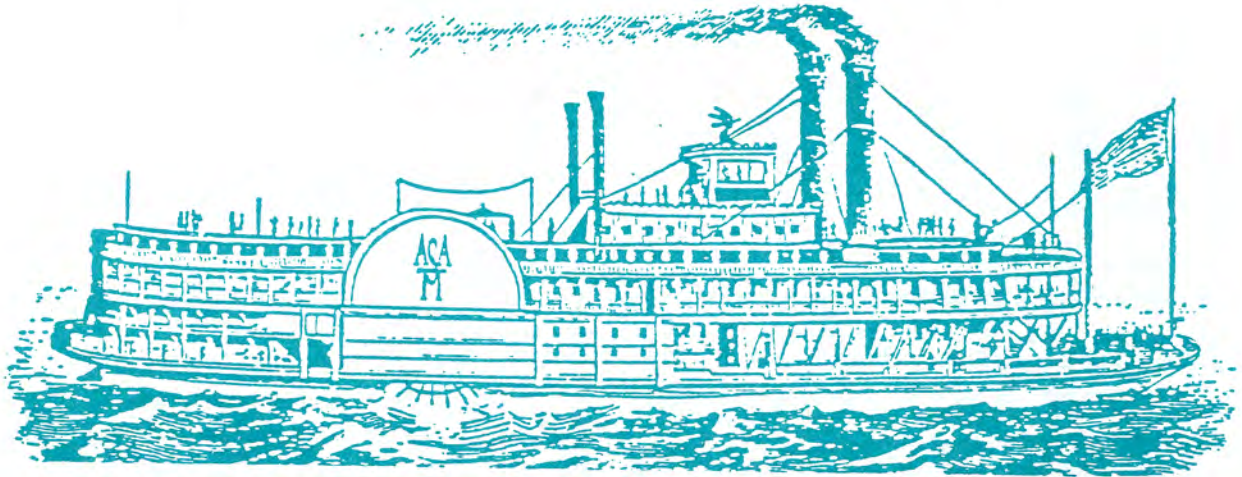
Subjects covered in the class include:

- Pneumatic principles of anesthesia machines.
- Pre-operative check out procedures.
- Day to day equipment maintenance.
- Equipment disassembly and assembly for cleaning and sterilization.
- Minor troubleshooting and repair.

Upon completion of the course, students will receive a 0.6 continuing education credit through Madison Area Technical College.

The three day class is held monthly at the Ohmeda Technical Training Center in Madison, Wisconsin. For additional information and registration, please call 1 800 345 2700 and ask for the Technical Training Center.

Lectures, Workshops, Exhibits,...



...and all that Jazz!

The Third Annual

ASATT Meeting & Educational Program

Saturday & Sunday, October 17 & 18

Sheraton New Orleans Hotel

800 Canal Street, New Orleans

LECTURES ON:

- > *Difficult Intubation*
- > *Malignant Hyperthermia*
- > *Anatomy of the New Anesthesia Delivery Systems*
- > *Rapid Transfusion Methods*
- > *The Evolution of Anesthesia Technologists*

WORKSHOPS ON:

- > *Cell Savers*
- > *Fiberoptic Bronchoscopes*

FINAL PROGRAM TO BE MAILED IN AUGUST

REGISTRATION:

\$125. - ASATT Member

\$160. - non-ASATT Member

Registration includes breakfasts, coffee breaks, reception, syllabus, and certificate of attendance for those signing-in both days.

Registration for this meeting is limited.

AIRFARE & ACCOMMODATIONS:

Uniglobe Paragon Travel has been selected as the official travel agency for travel arrangements to the conference this year. With Uniglobe Paragon hotel accommodations, air transportation, and automobile rentals can be made quickly and conveniently. Lodging is available in a wide range of prices. Although you may use the airline of your choice, special meeting fares have been arranged with United Airlines and Delta Airlines to provide you with reduced air travel pricing. Contact Uniglobe Paragon for details. They can be contacted at 800-888-5410 between 8am and 5pm PDT.

The combined attendance for the ASA and ASATT meetings will be considerable. You are strongly encouraged to make your travel plans as soon as possible to assure the best value and availability.



OPTIONAL ACCESS TO THE

AMERICAN SOCIETY OF ANESTHESIOLOGISTS ANNUAL MEETING & EXHIBIT OCTOBER 17-21

Technician registration at the ASA:
\$50, by pre-registration or at the ASA Registration Desk on site.

REGIONAL SOCIETY ACTIVITIES... by Dianne Holley

Let us announce what's happening in your area. Send a brief report of recent or future activities for the next issue by Sept 1, 1992 to Dianne Holley, 3810 Tonkawa Trail, Austin, TX 78756: (512) 451-7457. Send newsletters, if available, or give your info on my answering machine, if I'm not home. Photos (black & white, captioned) are also welcome.

California

The 8th Annual Meeting of the **California Society of Anesthesia Technologists and Technicians** was held in Monterey, May 29-31. Techs and nurses from California, Oregon, and the Philippines attended. The ninth annual meeting will also be located in Monterey. CSATT's newly elected president is Rod Turner, and vice-president is Janis Malatesta. Regional directors will be elected in the near future.

For further information:

Wes Simpson at (619) 541-3444.

Colorado

The ASATT booth at the annual meeting of the American Association of Nurse Anesthetists (AANA) in Denver will be run by the **Colorado Society of Anesthesia Technicians** at their August 10-12 meeting. They are hoping to share a lot of important information with the CRNA's at the exhibit.

For further information:

Ann Martin at (303) 270-8275

Florida

Anesthesia techs will have a unique opportunity to use the Shands University Hospital anesthesia machine simulator to enhance problem-solving abilities at the **Florida Society of Anesthesia Technicians Annual Statewide Meeting**. The meeting is slated for September 26-27 in Gainesville. Techs will divide into small groups to participate in the "hands-on" learning experience that the simulator will provide. The meeting is being coordinated by Jerry Guttery, with help from Ohmeda and Draeger.

For further information:

Ed Vasquez at (407) 897-1529[work], or (407) 832-7687[home].

Illinois

June 26-27 are the dates for the **Illinois Society of Anesthesia Technology's Peoria Meeting and Membership Drive** for south and central Illinois; Proctor

Hospital is the location. The meeting will feature a reception and dinner on the 26th and an informational meeting on the 27th. Contact Linda Walls at (309) 691-1027. The ILSAT holds educational meetings monthly and is preparing for its first statewide seminar, November 6-7.

For further information:

Greg Alexander at (708) 355-6525.

New York

The **New York State Anesthesia Technology Association** held their *Seminar and Workshop* in Syracuse, in April, with 80 Techs in attendance. NYSATA is forming six regions to better serve all areas of the state. The regions are centered in New York City, Syracuse, Albany, Endicott-Binghamton, Rochester, and Buffalo.

For further information:

John Armstrong at (716) 336-3377 or

George Mann at (315) 464-4640.

Ohio

The **Ohio Society of Anesthesia Technologists and Technicians** is proud to announce their new members: The Ohio Association of Nurse Anesthetists. OSATT meets monthly for educational purposes on the 4th Saturday of each month. The August meeting will focus on autotransfusion, and the September meeting will feature a presentation on malignant hypothermia.

For further information:

Wilma Frisco at (216) 541-5710.

Texas

El Paso is the location for the for the **Texas Society of Anesthesia Technology 2nd Annual Meeting and Seminar** (September 12-13). The meeting will address both business and educational topics including a "hands-on" study of the cell saver. This meeting coincides with the Annual Meeting of the Texas Society of Anesthesiologists. Several chapters within the state have been holding regular meetings: The El Paso Society

meets the third Tuesday of each month [Robert Lujan: (915) 857-1919], the San Antonio Society held a banquet in May [Raul Sanchez: (512) 675-1564], and the Dallas/Fort Worth Society is just organizing with their first meeting in June [Susan Guthrie: (817) 485-5963].

For further information:

Dianne Holley at (512) 451-7457.

Virginia

The **Virginia Society of Anesthesia Technologists and Technicians** and the Pennsylvania and Maryland tech societies co-sponsored the *Tri-State Anesthesia Tech Meeting* in May. Attendance was excellent with over 100 techs gathering for the educational and business meeting.

For further information:

Linda Ferris (703) 985-8351 or

Paul Faupel (410) 461-3463.

Washington

The annual *Seafair Meeting* of the **Northwest Society of Anesthesia Technology** is scheduled for August 1 in Seattle, at the Convention Center. Topics will include pediatric anesthesia, blood gas technology, circuit filtration, fiberoptic bronchoscopes, and troubleshooting anesthesia machines. Attendees of the all-day seminar will have access to the exhibits at the adjacent meeting of the Washington State Society of Anesthesiologists.

For further information:

Dwight Shields at (206) 548-6538.

Wisconsin

The first statewide meeting of the **Great Lakes Society of Anesthesia Technicians** is slated for September 12-13 in Oshkosh. The meeting will feature lectures and "hand-on" workshops for anesthesia machines, pulse oximeters, and blood pressure monitors. Registration forms will be available in July.

For further information:

Dean Rux at (715) 387-7179.

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Qualifications: Degree in respiratory therapy or biomedical engineering technician, or equivalent experience.

Duties: Clinical technological support, materials management (eg consummables inventory), quality assurance (eg anesthesia delivery systems), and teaching/instructing.

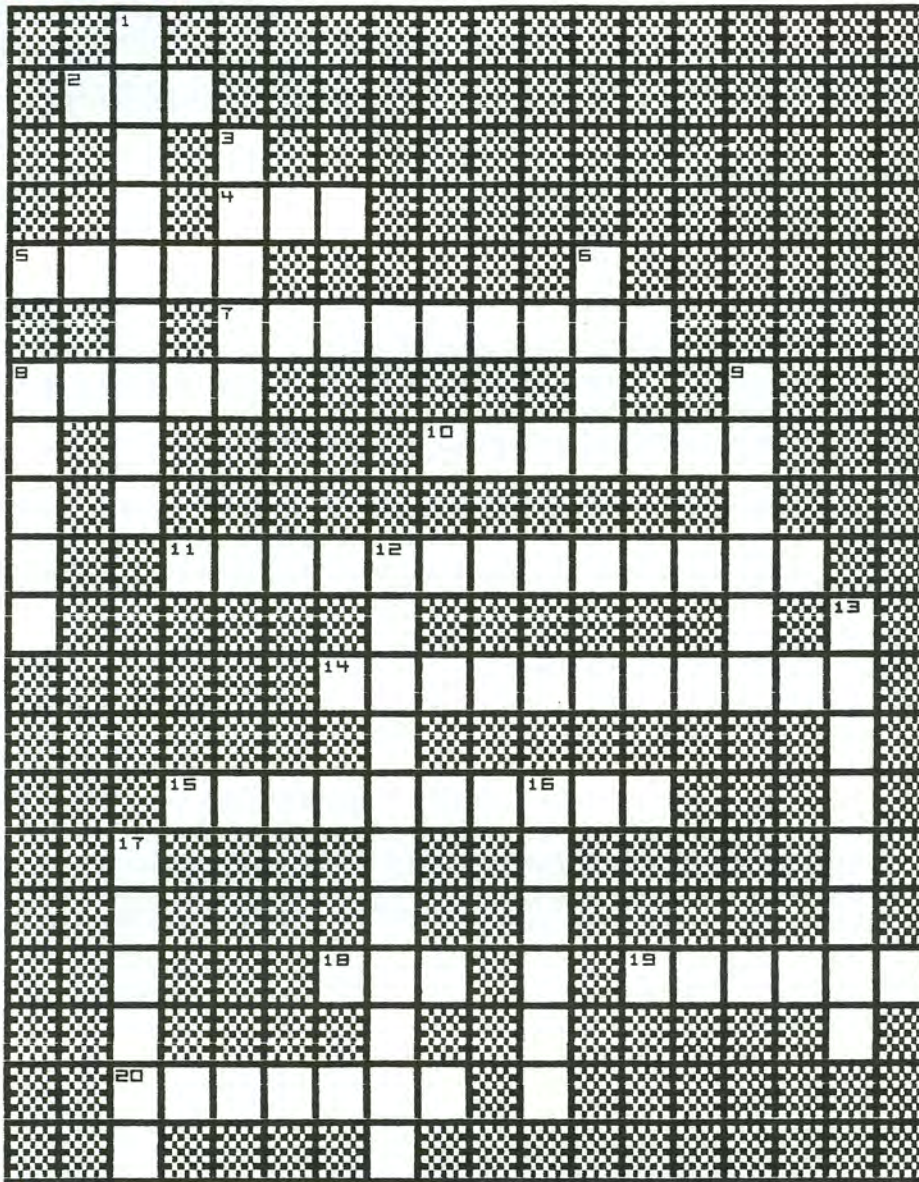
Salary: Commensurate with experience and training.

Contact: Earl S. Ransom, MD
(919) 966-5136

University of North Carolina Hospitals
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TECHNICIAN

ACROSS



LUB-DUB!

ACROSS:

- 2 Number of V-leads in a full 12-lead ECG.
- 4 Standard color of the left leg electrode connector.
- 5 Standard color of the right arm electrode connector.
- 7 Dutch anatomist who first described the ECG triangle.
- 8 Standard color of the chest lead electrode connector.
- 10 The ECG waveform is a measure of _____.
- 11 Modern ECG monitors have circuitry that protects the unit from the use of a _____.
- 14 Term for an abnormally fast pulse rate.
- 15 Term for an abnormal ECG waveform.
- 18 For best electrode contact, the skin surface should be _____ and free of hair.
- 19 60 Hz interference is often caused by a poor _____.
- 20 Term for extra beats seen on the ECG waveform.

DOWN:

- 1 The calibration standard for ECG monitors is one _____.
- 3 Standard color of the right leg electrode connector.
- 6 Lead II measures the signal between the right arm and _____ leg.
- 8 Standard color of the left arm electrode connector.
- 9 The standard speed of the ECG sweep is 25 mm per _____.
- 12 Term for an abnormally slow pulse rate.
- 13 Respirations may cause a wandering _____ on the ECG.
- 16 Random noise on the ECG is usually caused by _____ artifact.
- 17 Metal used in most ECG electrodes for optimum signal.

Reference:
Carr JJ & Brown JM:
Introduction to Biomedical
Equipment Technology,
Wiley & Sons, New York; 1981



Answers to
previous puzzle:

V Y POPOFF
ASTM O I
P E K ABSORBENT
FLOWMETER C
A R P EXHALATION
I I E N G V F
L Z R E U E L
S E A E L INHALATION
A R T D A G A
F O U L E T D I S C S T
E R E O N H
H E R G E O
A C X
CYLINDER K Y
O V G
T F D I A M E T E R
H L L N
A C U V
N I T R O U S O X I D E
E 2 H

What does **ACCURACY** mean?

by *John W. Spaulding*,
ASATT Executive Director

Managing the membership of over six hundred members, as of July 1, 1992, requires accuracy. Accuracy means that you will receive your quarterly newsletter, as well as being included in all membership educational events and correspondence, in a timely manner. The accuracy of our record keeping depends on how well the national office is updated with changes in your addresses and work places. Your cooperation in being precise when completing and returning forms to the national office will save your society money. When forms are not completed thoroughly it requires a letter or telephone call to complete the information requested on the form, which slows the process of our communication to the members. *The Executive Vice-President Leanne Spaulding, who reviews all forms returned to the national office, stated to me the other day, "filling in the blanks makes cents."* What she stated is very true in today's market of costly communications. Nothing is more frustrating than getting your mail three weeks after it was postmarked. Your accuracy will help improve the system.

A helpful hint when identifying yourself as a member on forms or correspondence: *please* include your membership number. Only you are in possession of the number that was issued to you on your membership card and certificate. Including your number will speed the process of locating your membership records. Thank you for your cooperation, and remember, *"it makes cents!"*

Questions: Call 1-800-352-3575.