

*Alumni Bulletin*

INDIANA UNIVERSITY  
SCHOOL OF DENTISTRY

SPRING ISSUE, 1963  
INDIANAPOLIS, INDIANA

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# Indiana University School of Dentistry ALUMNI BULLETIN

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# The Expanding Program in Pedodontics

*by Ralph E. McDonald, Professor and Chairman of Pedodontics*

In an incredibly short time, slightly over 30 years, the practice of dentistry for children has grown and has become recognized as one of the most important, if not the most important responsibility of the dental profession. Growth and expansion of pedodontics must continue in order to meet the dental needs of a rapidly expanding child population. The anticipated growth in population along with successful dental health education will bring unprecedented demands for dentistry for children.

Considerable change has taken place in the past decade in the undergraduate, postgraduate and research programs in pedodontics. An attempt has been made at Indiana University to keep pace with increasing demands on the profession so the graduate will be prepared to meet the challenge of providing dental care for children. This report has been prepared to acquaint alumni and friends of the University with the expanding program in pedodontics.

## Undergraduate Curriculum

While there continues to be an emphasis on mechanical and technical procedures, there has been a dramatic change in dentistry for children to the practice of preventive techniques and measures. The present-day graduate realizes that much of the backlog of dental needs of children can be overcome only through the practice of the proven clinical preventive procedures. They further realize that many of the crippling dental conditions that are evident in the adult population can be prevented through diagnosis and treatment of dental disease and irregularities in the occlusion during the childhood period.

The undergraduate clinical program is directed by Dr. Paul Starkey. The senior student is prepared for clinical assignments by a lecture series beginning during the second semester of the junior year, and by a technic course in pedodontics, coordinated with a course offered by the Department of Orthodontics. During the past five years, a summer program in pedodontics has grown quite successful. A maximum of 20 per cent of the senior students may enroll in the 13-week summer program and by so doing, essentially complete their clinical assignments. A student's participation in the summer clinical course lightens his program during the regular school year and allows additional time in research activities, library work, or an opportunity to undertake more advanced clinical assignments. The summer spent in the clinic gives the student the advantage of experience and preparation to meet the heavy requirements of the senior year.

The student is fortunate in being able to provide dental care for the large number of child patients presenting both routine and challenging problems. It is estimated that during one year there will be approximately 10,000 individual child patient visits to the clinic. All patients selected for treatment receive complete care and in most instances all the care is provided by the same student.

Dr. Frederick R. Henshaw was Dean of the University School of Dentistry from 1914 to the time of his death in 1938. As a result of his interest in developing a dental program for children, the United States Public Health Service in 1935 designated Indiana University as a research center for the study of dental diseases of children. Some of the funds for the recent expansion of the clinical

facilities were provided in Dean Henshaw's will. On April 18, 1962 at the dedication of a new addition to the Indiana University School of Dentistry, the Children's Clinic was dedicated "The Mary Edith Henshaw and Frederick Rich Henshaw, Jr. Memorial Clinic for Children."

The busy undergraduate clinic with background music providing a reassuring atmosphere for the young child patient, efficient dental assistants, enthusiastic staff members and students working to prepare themselves for private practice, provides a fitting tribute to Dean Henshaw.

### Chairside Assistant Program

A program to teach the dental student to work effectively with a well-trained and efficient chairside assistant was begun in December, 1959. The program, sponsored by the United States Public Health Service, arose from an awareness that one important way to meet the developing critical dental manpower shortage would be to train the dental practitioner in more efficient methods of practice. The effective utilization of the chairside assistant

was seen as a means of increasing efficiency and extending the services of the dentist to more people. Since approximately one-third of the dentists work without even one assistant, it is evident that the dental student must be made aware of the contribution an assistant can make to the practice of dentistry. It is indeed fortunate that Indiana University has been chosen as one of the schools for the pilot research programs in utilization of auxiliaries.

The students in the Department of Pedodontics have been quick to realize the benefits of the trained assistant in preparing instrument set-ups, manipulation of materials, sterilization of instruments and in the completion of records. There is evidence that both the quantity and quality of work of the student working with an assistant have improved. Some students have completed as much as 30 per cent more work during assigned periods. At the present time the University employs 15 chairside assistants. Although the assistants work primarily in the Department of Pedodontics, and the



Left to Right: Ralph E. McDonald, Staff; Ralph W. Gilmore, Graduate Student and Teaching Fellow, Birmingham, Ala.; Darryl C. Harris, Resident, Brownsburg; Bernard C. Kerhove, Graduate Student, Camden; H. R. Klein, Graduate Student, Indianapolis; Charles H. Rosenbaum, Graduate Student, Iowa City, Iowa; James A. Shupe, Intern, Troy, N.Y.; Robert H. Spedding, Graduate Student, Gary; Robert M. Moore, Graduate Student, Chicago; Ali Eloui Bastawi, Graduate Student, Cairo, Egypt; W. Ray Davis, Graduate Student, Monticello, Georgia; James E. Jerger, Resident, Evansville; Donald F. Bowers, Graduate Student, Dayton, Ohio; James P. McKnight, Graduate Student, Memphis, Tennessee; James C. Jinks, Intern, Indianapolis; Stanley C. Herman, Staff; Paul E. Starkey, Staff; and, W. Bailey Davis, Staff.

Riley Hospital Clinic, they are assigned to students in other departments on a definite schedule.

### Riley Hospital Dental Clinic

In recent years there has developed an increased awareness of the need for expanded dental services for the chronically ill and handicapped child. Senior students and second year dental hygiene students are assigned to the James Whitcomb Riley Hospital dental clinic where they have an opportunity to gain an appreciation of the dental aspects of the various handicapping conditions. The interns, residents and staff members demonstrate the methods of treating handicapped child patients. The less complicated cases are managed by the students. Students assigned to the hospital clinic also have an opportunity to visit the wards and learn something of the pediatric management of hospitalized children.

Dr. John R. Mink, who is now chairman of the Department of Pedodontics at the University of Kentucky, described the James Whitcomb Riley Dental Clinic program in the March, 1960 issue of the Alumni Bulletin.

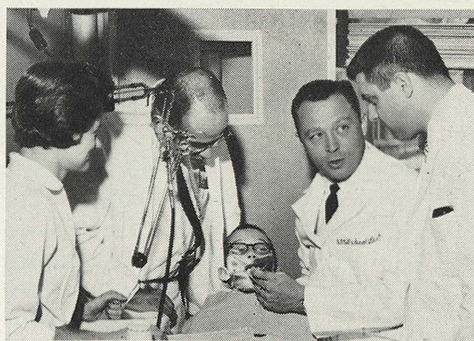
During 1963, work will begin on an addition to the Riley Hospital which will allow expansion of the dental clinic to include seven operatories, a laboratory, reception room and offices. A room in the new surgical suite will be equipped for dental procedures under general anesthesia.

### Internship-Residency Program

The recently expanded facilities of the Riley Dental Clinic and the anticipated future expansion have allowed an increase in clinic personnel and services. Doctor W. Bailey Davis directs the program of the pedodontic interns and residents, assisted by several consultants who take time from their private practice to participate in the teaching program.



Dr. James R. Roche is demonstrating for a senior student. Miss Shirley Summers is the chairside assistant.



Miss Marthana Smith, dental assistant; Dr. James Jerger, Resident; and Dr. James Shupe, Intern, listen to an explanation of the dental treatment of a handicapped child by Dr. W. Bailey Davis.

In 1960, the Council on Dental Education of the American Dental Association approved the pedodontic hospital program for two interns and two residents. There has been considerable interest in this program and the selections are made from a large number of applicants from our senior class and from graduates of other schools. The interns and residents are encouraged to enroll in graduate courses and are given sufficient free time to take 5 credit hours of work each semester. The 2-year program offers an unusual opportunity for study and research in the area of handicapped children and satisfies the educational requirement of the American Board of Pedodontics.

## Cerebral Palsy Dental Clinic

The clinic located in the Rotary Building of the James Whitcomb Riley Hospital for Children is a modern, well-equipped 3-chair clinic under the supervision of Dr. Robert Buckley. The program is closely coordinated with the program of the Riley Dental Clinic and the undergraduate and graduate programs in the school. Undergraduate students, graduate students and dental hygiene students are assigned to the Cerebral Palsy Clinic on a regular schedule and have an opportunity to become acquainted with the dental needs of cerebral palsied children.

For the past four years the Department of Pedodontics has been the recipient of a grant from the United Cerebral Palsy Research Foundation. This grant has allowed a graduate student to receive special training in the management of dental problems of cerebral palsied children and an opportunity to conduct research in the related field.

## Postgraduate Program

It is generally agreed that with today's crowded curriculum, it is impossible to

acquaint the student with more than the fundamentals in the clinical areas during the undergraduate years. The education of a dentist must necessarily be continued throughout his active years of practice. A short postgraduate or refresher course offers one means of acquainting the practicing dentist with new clinical techniques and recent developments in the field of pedodontics.

During the past five years the department has offered short courses consisting of lectures and several half-days of clinical participation. Consideration is being given to developing additional courses for those who have taken the basic course with an opportunity to engage in the more specialized skills in pedodontics. From time to time, special one-year programs have been developed for graduates who seek additional experience in the clinical or research areas of pedodontics. The participants have been non-degree students from other schools who seek training at Indiana University with the intention of returning to their school and continuing in teaching and research.

The Department of Pedodontics, aided



Participants in the 1962 postgraduate course in pedodontics, (left to right): Dr. Ralph I. Kroot, Gary; Dr. H. H. Rothman, Wausau, Wisconsin; Dr. Ralph E. McDonald; Dr. Donald B. Fread, Terre Haute; Dr. Dale A. Benefiel, Oaklandon; Dr. Robert J. Kemp, Evansville; Dr. M. G. Smith, Tipton; Dr. Russell L. Heyde, Warsaw; and, Dr. C. T. Scott, Indianapolis.

by a grant from the Indiana State Board of Health, has offered several one-week postgraduate courses in Dentistry for the Handicapped. These invitational courses have been resigned to acquaint practicing dentists throughout the state of Indiana with the recent developments in dental care for handicapped children and adults. It is often impractical to bring all of the children and adults with special dental problems to the Medical Center for treatment; dental care provided locally is much more convenient for the patient and usually less expensive. It is hoped that as a result of these special courses a number of key people throughout the state will become more aware of the problem of the handicapped and will provide complete dental care.

### Graduate Program

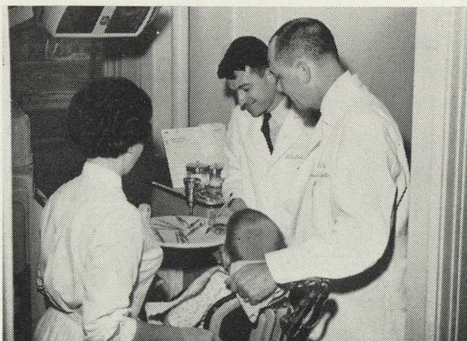
With growing demands for graduate and advanced training in pedodontics, the graduate program has been expanded. Four students are accepted each year for a 2-year program leading to the M.S. or the M.S.D. degree. The graduate program, like the internship-residency program, meets the Council on Dental Education requirements for a specialty practice and the educational requirements of the American Board of Pedodontics. The majority of those who have completed the degree program have gone into a practice limited to children. Two graduates, however, Dr. John R. Mink and Dr. Richard E. Jennings, are Chairmen of Pedodontic Departments at the University of Kentucky and the University of Texas. Dr. Stanley Herman, another recipient of the M.S.D. degree, is now a full-time associate in the graduate program.

The Department of Pedodontics has been fortunate enough to receive sizeable grants from private foundations and State and Federal agencies, which has allowed

for fellowships and for the equipment of pedodontic clinics throughout the Medical Center. The new dental and research equipment and research fellowships have made it possible to attract outstanding graduate students to the program.

The scope of the practice of dentistry for children continues to expand. In-

*(Continued on page 47)*



Dr. Paul Starkey is assisting graduate student Dr. Ralph Gilmore in the examination of a child patient.



Dr. Stanley C. Herman working with students in the new graduate pedodontic clinic. The clinic was completed in the Fall of 1961.

# Deep Cavity Preparation and Pulp Exposure

by Grant Van Huysen\* and M. Marzouk†

The establishment of retention and resistance cavity form makes necessary the cutting of dentin between the carious area and the pulp. As the dentist shapes the cavity floor or pulpal wall he cannot help but be conscious of the nearby vulnerable soft tissue pulp. When one reviews the accepted technics with respect to cavity preparation, the dental histologist is struck by the fact that the cut tissues are considered only from a macroscopic viewpoint. For instance a pulp exposure is recognized only when hemorrhage is visible to the unaided eye. The dentist is conscious of thermal conduction and will place insulating materials as a base for thermal conducting metallic fillings. However, the pulp is not capped unless blood is visible to the naked eye.

Dentists should be aware for one thing of the fact that bacteria can go through a pulp exposure opening that would be invisible to the eye. Plastic materials such as resins and silicates could also be, and are, forced through the cavity floor openings that are invisible to the eye.

It was decided, therefore, to prepare deep cavities in young dog's teeth (figure 1) and observe the procedures directly with an operating microscope. The cavities were cut rapidly at conventional speeds with a diamond point until the floor appeared red because of light transmitted from the pulp through the thin floor. The cavity floor at this stage measured about 0.1 mm. thick. The cavity was deepened under the operating

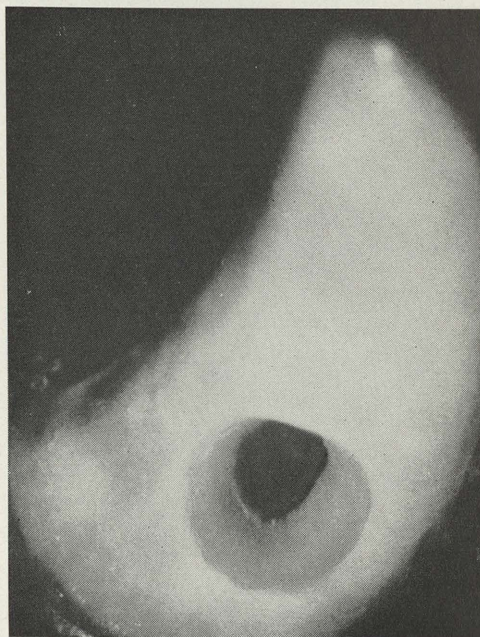


Figure 1. A deep cavity in a dog's tooth, magnified 5X.

microscope with a revolving steel bur until the floor became flexible when pressed with a blunt instrument. Careful bending of the cavity floor produced a microscopic fracture through which a clear fluid slowly exuded (figure 2).

Haldi<sup>1</sup> has collected this fluid in a capillary tube. He has shown that it is under a positive pressure. His chemical analysis shows that the protein content is less than that of blood plasma but that the glucose content is about the same as that of blood.

Figure 3 A and B shows a histologic section through one of these broken floors. The cavity contains the coagulated fluid which appears as a fine meshwork stained with hematoxylin. In spite of the fact

This study was supported by Research Grant MD2158 from the United States Army, Office of the Surgeon General.

\* Professor in Oral Anatomy

† Graduate Student in Operative Dentistry



Figure 2. A higher magnification (50X) to show the fractured floor and clear exudate.

that a portion of the cavity floor is depressed and fluid has escaped through an opening, there is no evidence of hemorrhage nor was it seen with the unaided eye at the operative site.

In other words, it is quite possible for the dentist to inadvertently produce a pulp exposure which may go undetected and become covered with a filling or irritating base. It should be remembered that bacteria could also be admitted to the pulp through such an unseen microscopic opening.

Because of this possibility all deep cavity floors or pulpal walls should be routinely covered with relatively non-irritating calcium hydroxide. Then if there should be a microscopic unseen pulp exposure the water miscible calcium hydroxide powder or a slurry will, it has been shown, protect the pulp from an irritating cement base. It should be remembered that the calcium

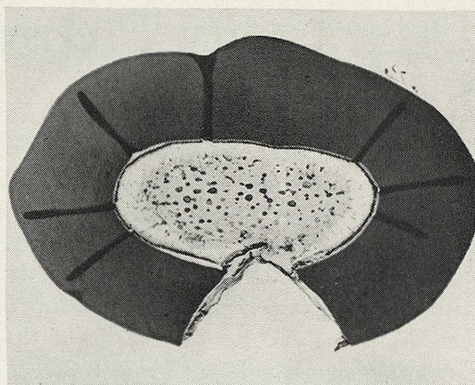


Figure 3A. A histologic section to show the fractured depressed cavity floor and the coagulated and stained nonhemorrhagic exudate in the cavity. (100X magnification).

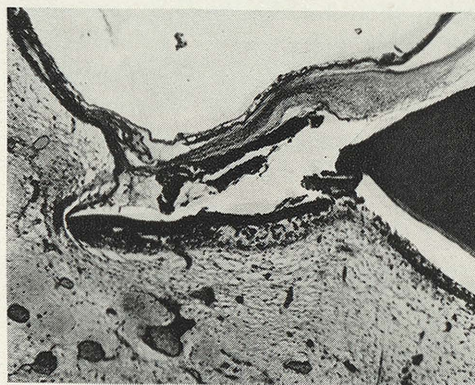


Figure 3B. Higher magnification (200X) of section seen in figure 3A.

hydroxide is not resistant to pressure so that one must use care in placing a semi-solid base over the capped pulp exposure.

As long as one is treating biologic material one cannot be sure of 100 per cent success. It is felt, however, that the more precise treatment of deep cavities suggested above will reduce appreciably the chance of pulp pathology in cases where deep cavities are necessary.

<sup>1</sup> Haldi, J., Wynn, W. and Culpepper, W.D.: Dental pulp fluid, I., Arch. Oral Biol. 3:201, 1961.

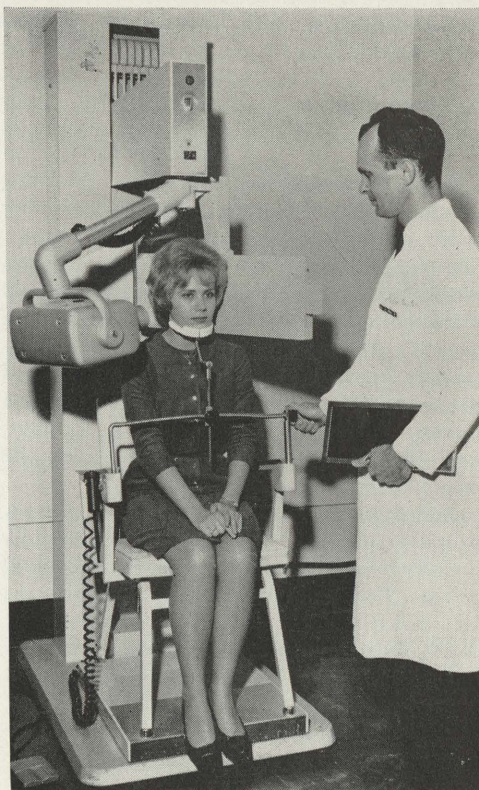
# Panoramic Roentgenograms

by Jack D. Carr, Instructor in Radiology

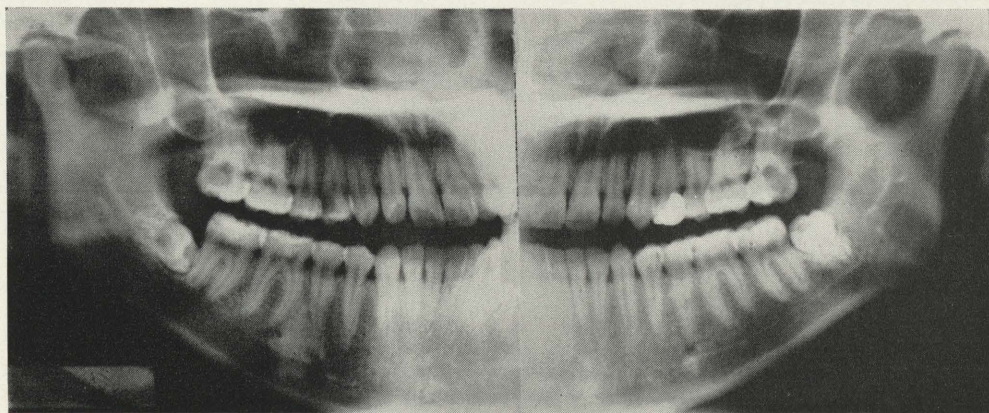
The Radiology Department at the School of Dentistry has a new panoramic X-ray unit (AXRM "Panorex"). So far the results obtained from its use indicate that it will furnish a great deal of information for special types of survey examinations. It produces an excellent view of the body and ramus and condyles of the mandible and reasonable views of the maxillae. Small defects often are not depicted well and supplementary films sometimes are necessary. Yet it furnishes a quick general survey view useful for many special purposes.

James O. Beck, a new full-time faculty member in the department, is shown demonstrating the apparatus. He recently returned from a year of graduate study in radiation biology at the University of Rochester, School of Medicine and Dentistry. He holds the cassette which will be placed in the white rectangular film holder behind the head of the patient. The rays enter this piece through a vertical slot not shown. During operation the film moves horizontally within this piece. The tube and film holder circle around the patient. The chair moves the patient to her right at one point, when the

cervical vertebrae are superimposed on the view of the jaws. The results are illustrated in the second figure.



Dr. Beck demonstrates apparatus.



Example of panoramic roentgenogram.

# Faculty Publications for the Calendar Year of 1962

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*Each year the Alumni Bulletin carries abstracts of papers published by the dental school faculty. Although not entirely complete, the following group contains a major share of the publications for 1962.*

R.W.P.

Hine, M. K.: *Periodontal traumatism. J. D. Res. 41:290, 1962.*

Most periodontists are convinced that trauma from occlusion is a complicating rather than an initiating factor in periodontal disease. Trauma will not initiate a gingivitis or pathologic pocket formation but can modify and accelerate periodontal disease which is already present. Correction of occlusion is an important aspect in the therapy of periodontal disease as well as the prevention of periodontal disease. All local irritants such as calculus, food impaction, poor dentistry, must also be corrected.

Added occlusal forces will result in a stronger periodontium and it is assumed that a stronger periodontium will be a deterrent to periodontal disease. Long term clinical studies on humans are needed to prove this, however, since most of the statements to be found in the literature regarding the relationship between occlusal stresses and periodontal diseases are supported by clinical observations only and remain to be proved or disproved by acceptable scientific research on human subjects.

Hine, M. K.: *The Journal of Periodontology, Vol. 33, quarterly, 1962.*

Four issues of the Journal of Periodontology were published in the year 1962, with a total of 404 pages. This journal, which is now recognized as one of the better specialty journals in dentistry, includes articles related to the prevention, etiology, diagnosis and treatment of periodontal disease.

Shafer, W. G.: *Experimental salivary gland tumorigenesis. J. D. Res. 41:117, 1962.*

A series of studies has been carried out to investigate experimental tumorigenesis in the salivary glands of rats and mice under a variety of conditions. Several carcinogenic hydrocarbons were tested, as well as the effect of desiccated

thyroid, testosterone, and X-ray radiation on tumor induction.

Attempts were also made to induce salivary gland tumors by painting the palates with carcinogens, adding carcinogens to the diets, and introducing foreign materials into the gland.

Tumors produced were epidermoid carcinomas, although occasional stromal sarcomas also developed. No benign tumors were found or any form of adenocarcinoma.

Shafer, W. G.: *Tissue culture characteristics of the BW1081 mouse salivary gland tumor. I. Preliminary investigation of nutrient medium components. J. D. Res. 41:125, 1962.*

Growth characteristics of the BW1081 mouse salivary gland tumor cells were tested in a tissue culture system by systemically eliminating each component of the nutrient medium and determining the effect on cell proliferation by means of actual viable cell counts. Elimination of individual amino acids, individual components of Earle's basal salt solution, or of lactalbumin hydrolyzate or egg ultrafiltrate resulted in general growth failure. The addition of individual hormones, RNA and DNA at certain levels resulted in cytotoxic effects, while at other levels certain degrees of stimulation of cell proliferation were noted. This stimulation was most pronounced with purified growth hormone.

Standish, S. M. and Shafer, W. G.: *Focal osteoporotic bone marrow defects of the jaws. J. Oral Surg., Anesth. & Hosp. D. Serv. 20:33, 1962.*

A series of 18 specimens of focal osteoporotic bone marrow defects of the jaws, which were described as circumscribed radiolucencies, were reviewed. The majority of these lesions (83 per cent) occurred in women and were located most frequently (89 per cent) in the mandibular molar regions. None were located anterior to the bicuspid areas in either jaw. The patients had ranged in age from 20 to 65 years (average age, 42 years) with nearly a third of the lesions noted in the third decade. Nearly all of the lesions occurring in women presumed

to be premenopausal were composed of red marrow, where as those in patients past age 51 were composed of fatty marrow. Possible explanations are considered and the clinical significance of these lesions is discussed.

*Standish, S. M. and Clark, P. G.: The effect of Dilantin sodium on connective tissue generation in polyvinyl sponge implants. Transplantation Bull. 29:439, 1962.*

The effects of Dilantin sodium administration on connective tissue generation in subcutaneously implanted polyvinyl-formal (Ivalon) sponges was studied in Wistar rats. The sponges were harvested for histologic and biochemical examination after 6 and 14 days implantation. Hydroxyproline values obtained from a limited number of samples were elevated in sponges implanted for 6 days in the Dilantin-treated group. At 14 days, the difference in the values obtained for the control and Dilantin groups were not statistically significant.

Fibroblast-like cells containing cytoplasmic periodic-acid Schiff positive granules were noted only in sponges from the Dilantin-treated groups. The inhibition of metachromasia suggests the presence of strong protein-carbohydrate bonds in collagen precursors of Dilantin induced fibroplasia.

*Standish, S. M.: Reevaluation of didactic and laboratory courses in general pathology necessitated by the enlarging undergraduate dental program. J. D. Educ. 26:152, 1962.*

Basic concepts and philosophies of teaching general pathology in the undergraduate dental curriculum are presented. A correlated approach to teaching in this area is proposed, emphasizing the dynamic rather than the morbid aspects of disease. Revision of the dental curriculum seems inevitable if dentistry is to pay more than lip service to the concept of disease processes affecting the whole patient. The precise manner in which these concepts are presented to the student then becomes of only secondary importance provided that an integrated and correlated approach is taken in both the basic biological and clinical sciences.

*Hansen, Niles M. and Standish, S. M.: Effects of high frequency sound on the skin and oral tissues of rats. D. Progress 2:76, 1962. 1962.*

In the investigation reported here a commercial ultrasound instrument was used in tests

on the back, abdomen, and mandibular regions of male and female adult albino Wistar rats. Animals received dosages ranging from 0.5 to 1.25 watts/cm<sup>2</sup> in single and multiple applications for varying periods of time. In reports on oral treatment of humans with ultrasound, the average dosage indicated was 0.5 watts/cm<sup>2</sup> for 3 minutes. Treatment was generally administered for over a period of 5-6 consecutive days. In these tests with rats this same minimal dosage produced no significant changes in the skin, either grossly or histologically. With maximum dosage of 1.25 watts/cm<sup>2</sup> there were gross skin changes, which increased in severity with increased length of treatment. In the first 2 minutes there was formation of petechiae, which was not limited to the area of treatment. At maximum dosages microscopic skin changes were also observed. These included thinning and ulceration of epithelium, absence of cell nuclei, atrophy of hair follicles, and, in certain areas, hyalinization. Salivary glands of animals treated with maximum dosage showed no immediate effect, but microscopic examination later revealed focal changes in granular tubules and destruction of cellular membranes. No significant visceral changes were noted. Application of ultrasound to the mandible did not produce changes in the bone, periodontal membrane, or pulp of rat molars or incisor teeth.

*Phillips, R. W. and Schnell, R. J.: The use of rubber impression materials, Practical Dental Monographs, May, 1962, 29 pages.*

A monograph on the properties and use of rubber impression materials. The discussion, illustrated, emphasizes the importance of a custom-made tray, minimal thickness of impression material, use of the rubber cement in the tray, a curing time of at least eight minutes and prompt pouring of the impression.

*Phillips, R. W., editor and Ryge, G., co-editor: Proceedings of a workshop on adhesive restorative materials, Aug., 1962.*

This 270 page booklet is a transcription of a workshop on adhesive restorative material that was held at Indiana University in September 1961. The sections are divided into (1) Principles of adhesion, (2) Polymer chemistry, (3) Test methods and (4) Tooth Structure. While much of the contents of the publication is technical in nature, the recommendations that evolved from this conference are of interest. While the problems involved in de-

veloping an adhesive restorative or cementing material are formidable, they are not insurmountable.

Swartz, M. L., Phillips, R. W. and Chamberlain, N.: *Continued studies on the permeability of cavity liners.* J. D. Res. 41:66, 1962.

A means of testing the permeability of cavity liners to various electrolytes, including those leached from dental cements, has been evolved and described. Five commercial products of the varnish type were evaluated by this method, and results indicate that the passage of ions is greatly reduced, but not completely inhibited, by any of the materials. There was no discernable difference in the permeability of the different commercial products to a given compound.

Swartz, M. L. and Phillips, R. W.: *Influence of manipulative variables on the marginal adaptation of certain restorative materials.* J. Pros. Den. 12:172, 1962.

The marginal adaption of dental restorations placed in extracted teeth was studied by means of a tracer method utilizing  $\text{Ca}^{45}$ . The following observations were made:

1. There was no difference in the sealing ability of inlays cemented with zinc phosphate, resin, or zinc oxide-eugenol cements. All restorations exhibited good adaptation initially, with a slight increase in marginal leakage occurring with time.

2. The sealing qualities of zinc oxide-eugenol cement were initially much superior to those of gutta percha.

3. The adaptation of amalgam restorations was not appreciably altered by expansion or contraction of the alloy during setting, since the leakage patterns of grossly expanding and contracting alloys were comparable. Initial leakage of restorations placed with both alloys was virtually eliminated by the use of a cavity varnish.

Phillips, R. W.: *Certain biological considerations in the use of restorative materials.* New York S. D. J. 28:397, 1962.

The changing concepts in the field of dental materials relative to certain biological considerations were briefly reviewed. The future is an exciting and promising one.

Vieira, D. F. and Phillips, R. W.: *Influence of certain variables on the abrasion of acrylic resin veneering materials.* J. Pros. Den. 12:720, 1962.

This investigation was concerned with the influence of certain variables on the toothbrush abrasion of resin veneering materials. Two commercial acrylic resins, polymerized at three different curing cycles, were studied in conjunction with two types of toothbrushes and four cleaning agents. In addition to hardness measurements, abrasion was studied by weight loss, change in surface luster, and photographic examination of the tooth surface. A factorial design was used and the results were analyzed statistically.

1. Of the polymerization cycles employed, the higher the temperature, the greater was the hardness and resistance to abrasion. The clinical significance of the differences in values is, however, questionable.

2. Tooth brushing produced weight loss on all specimens, and the degree of abrasion was dependent on several factors, or their interaction, such as: (a) loss in weight and surface luster were inversely proportional to curing temperature; (b) in general, the stiffer the toothbrush bristle, the greater was the weight loss of the resin specimen when toothpaste or calcium carbonate was used as the abrasive; (c) in terms of weight loss, the order of abrasiveness of the agents studied was: water, commercial toothpaste, calcium carbonate, commercial toothpowder; (d) loss in surface luster was greater when a stiffer toothbrush was used in conjunction with certain abrasive agents such as calcium carbonate but not with the toothpaste; (e) water was a very mild abrasive, and although producing some weight loss, it acted as a polishing agent and thus increased surface luster.

Schnell, R. J. and Phillips, R. W.: *Dies for measuring accuracy of impressions.* D. Progress 2:249, 1962.

No research has previously been published comparing the results obtained with various test dies used for measuring dimensional change and distortion of rubber impression materials. The authors thus tested combinations of five different test dies and eight impression materials under standardized conditions. All tests involved a master casting or machined part which was tried on a stone die that had been poured into an impression of the original model.

The results showed that distortion, as measured, was directly proportional to the percent of undercut in the model and inversely proportional to the per cent taper in the master model. Dies with little or no taper in the preparation but severe undercuts in areas not involved in the preparation were found useful in determining small differences between products whenever a critical test of the material is desired. However, larger non-anatomical models had no particular advantage over the smaller non-anatomical models in testing accuracy of reproducing cavity preparations.

Kasloff, Z., Swartz, M. L. and Phillips, R. W.: *An in vitro method for demonstrating the effects of various cutting instruments on tooth structure*, J. Pros. Den. 12:1166, 1962.

Two hundred human teeth in groups of twenty were used to study the effects on the teeth when cavities were prepared with commonly used cutting instruments operated at different speeds. A fluorescent penetrating dye was utilized to reveal the extension of pre-existing defects or the initiation of additional defects. All of the instruments used in this study, with each of the different cutting tips, produced cracks in some teeth. Some instruments produced the effect with greater frequency than others. The frequency and severity of crazing in each group did appear to be influenced by the type of cutting tip used with the rotating instruments. However, the differences noted with various handpieces should not be interpreted as recommendations for the specific instrument. Rather, the investigation illustrates that a surface phenomenon is produced, the exact clinical significance of which is as yet unknown.

Swenson, H. M.: *Complete mouth reconstruction or destruction?* J.A.D.A. 65:345 Sept. 1962.

The cases presented illustrate some causes of failure in mouth rehabilitation. A thorough study should be made of each patient who requires drastic changes in the occlusal pattern. Hinge axis registrations on a good anatomic articulator enhances the possibility of an ideal occlusal relationship following reconstruction. It is important to maintain the proper mandibular relation and correct occlusal form. A badly worn amalgam restoration which is comfortable is more satisfactory than an improperly

constructed gold restoration. Crowns should be made in such a way that the gingiva is not traumatized or overly protected. Caution should always be exercised in any change of vertical dimension. Severe muscular pain, temporomandibular joint discomfort or changes of the periodontium may occur if this is disregarded.

Fixed replacements stabilize the dentition; whereas removable appliances frequently displace the teeth. Therefore, fixed appliances should be used whenever possible. If removable partial dentures are inserted, the mouth should be properly prepared to receive them. This may necessitate crowning or splinting teeth together in order to improve stability and direction of forces.

Although patients require complete mouth rehabilitation to restore the masticatory apparatus to an excellent functioning unit, if good clinical judgment and skill are not exercised, the patient would be better off to have nothing done.

Starkey, Paul E.: *A Study of four methods of presenting dental-health information to parents*. J. D. Children, First Quarter, 1962 pages 11-15.

One hundred twenty-five parents of children receiving dental services in the Department of Pedodontics at Indiana University, School of Dentistry, participated in this study. They were placed in one of five groups of 25 parents each, four for the presentation of dental health information and a written examination and one group for a written examination only. Group I read the printed material; Group II read the material and viewed nine slides illustrative of the material; Group III listened to a recording of the material; and Group IV listened to the recording and viewed the nine slides. Immediately after receiving the material, each subject completed an examination covering the material. Group V, the controls, received no pretest information, but completed only the examination. All four of the experimental groups performed significantly better than the group of controls, but no one experimental group performed significantly better than another. Those individuals with a high level of education made more correct responses than did those with a low level.

Each of the four methods used was of value in presenting dental health information to parents; the simpler methods of presenting the information were as effective as the more com-

plicated ones; and, those individuals with a high level of education were able to gain more knowledge than those with a low level.

Rosenbaum, C. H., Buckley, R. R. and McDonald, R. E.: *An evaluation of occlusion problems in cerebral palsied children. I.A.D.R. abstract, 1963.*

The purpose of this study was to provide information concerning occlusion and related problems in cerebral palsied children. The study group consisted of 124 cerebral palsied children and 141 non-cerebral palsied children in the 6-12 year age group. The occlusion was evaluated according to Angle's classification. In addition, a recording was made of mid-line discrepancies, overjet, overbite, open bite, cuspid relationship and crossbite. The examination included a clinical evaluation of the swallowing pattern of each child. There was a comprehensive review of the medical record of the cerebral palsied children. An evaluation of the data revealed that: 1. Bruxism was evident in 44 per cent of the cerebral palsied children and 20 per cent of the non-cerebral palsied children. 2. Seventy-six per cent of 21 hemiplegics exhibited a midline shift toward the involved side. 3. Visceral swallowing was more common in the cerebral palsied group (40 per cent) than in the normal group (24 per cent). 4. Overjet was greater and overbite was less in the cerebral palsied group. Numerous discrepancies in occlusion were found in a group of cerebral palsied children.

Dykema, R. W.: *Fixed partial prosthodontics. J. Tenn. D. A. 42:309, 1962.*

This article discusses the reasons why fixed partial prosthodontics has been avoided in the past and the reasons for the increased interest in this service. Diagnosis, treatment planning are concerned in some detail. Load-bearing ability of bridge structures, retention, pontic design and esthetic consideration are discussed. Size, form, and location of soldered joints are illustrated.

Johnston, J. F., Dykema, R. W., Mumford, G. and Phillips, R. W.: *Construction and assembly of porcelain veneer gold crowns and pontis. J. Pros. Den. 12:1125, 1962.*

The merits and deficiencies of alloys and porcelains are set forth. Technics for the

use of Ceramco No. 1 Improved alloy and Ceramco porcelain are discussed in detail. The authors prefer permanent cementation and tell why.

Garner, L. D.: *Tongue posture in normal occlusions. J. D. Res. 41:771 1962.*

Twenty-two Caucasian children of ages ranging from 7 years 8 months to 16 years were included in this study. There were 15 males and 7 females. A technique has been established to study the posture of the tongue based on the use of a radiopaque paste which made the soft-tissue surfaces of the mouth radiopaque. The results obtained in this study indicated a difference in the posture of the tongue between the rest position of the mandible and occlusion; however, the difference was not statistically significant at greater than the 5 per cent level of confidence.

The following results were observed: the apex of the tongue in 14 cases increased in height in relation to occlusal plane; the apex of the tongue moved distally when the mandible changed position from occlusion to rest in 12 cases; the vertical measurement of the apex of the tongue was the weakest measurement in its reproduction; the dorsum of the tongue in 13 cases dropped in the region of key ridge; in 14 cases, the soft palate velum moved forward or away from the posterior pharyngeal wall, in 14 cases, the base of the tongue moved forward or away from the posterior pharyngeal wall.

Burstone, C. J.: *Rationale of the segmented arch. A.J.O. 48:805, 1962.*

Although traditionally, in multibanding appliances, continuous arch wires have been used for various stages of therapy, certain disadvantages to their use should be considered. Conversely, segmentation of an arch can enhance treatment in a number of ways:

1. Segmentation offers the possibility of using multiple wire cross sections within the same arch. This permits a great deal of versatility in the selection of the proper cross section for a given tooth movement by optimal constant force. It also allows the selection in the same arch of heavy cross sections which are needed to control the anchor teeth.

2. Segmentation increases the distance between points of force application. The increased dimension lowers the load-deflection rate of the wire, minimizes directional changes

as teeth move, and makes available space for the long activations that are needed in springs with low load-deflection rates.

3. Unlike the continuous arch wire, in which actions and reactions may occur between adjacent teeth, segmental principles can be used for a better distribution of forces around the arch to those teeth that are most able to withstand displacement. Reactive forces and moments may cancel themselves if they are properly distributed to an anchorage unit.

4. By its very nature, a segmented arch can be prefabricated so as to not only increase office efficiency but give greater accuracy to the orthodontist in force control.

5. Prefabricated springs of various types can easily be calibrated, and convenient tables which give the force delivered for any given degree or millimeter of activation may be constructed.

6. Since, in segmentation, only those parts of the arch that are involved in a subsequent stage of treatment need to be fabricated, duplication of parts is kept to a minimum.

Wood, R. D. and Mitchell, D. F.: *Major salivary gland dysfunction: report of a case. Oral Surg., Oral Med. & Oral Path.* 15:1075, 1962.

A case of major salivary gland dysfunction in a 16-year-old boy is presented. No openings for Stensen's or Wharton's ducts were present. The mouth was dry, and as a result most of the teeth had been removed because of excessive caries. From the history elicited from the patient and from the clinical findings, this case could not be called hereditary ectodermal dysplasia, major salivary gland aplasia, or atresia. Because of the extreme rareness of cases of the latter two entities a review of the literature was very difficult and yielded meager results.

Regan, J. E. and Mitchell, D. F.: *Experimental evaluation of roentgenographic interpretation of the maxillary sinus: a preliminary report. J. Ind. S. D. A.* 41:491, 1962.

The heads of eleven cadavers were bisected sagittally so that the sinuses were readily accessible. Lateral headplate roentgenograms were made before and after the sinuses were filled with radiopaque media. Tracings of the sinuses were made. Preliminary findings inferred that the inferior boundary of the maxillary sinus can be observed accurately on the roentgenogram as studied.

Ramadan, A. E. and Mitchell, D. F.: *The roentgenogram and the maxillary sinus. O. Surg., O. Med. & O. Path.* 15:566, 1962.

Eight human skulls were studied. The apparent relationship of the roots of the upper posterior teeth to the maxillary sinus can be altered by changing the vertical angulation. These roots rarely project through bone into the maxillary sinus. It was not possible to distinguish, by conventional roentgenographic techniques, between roots which pierced the bony sinus floor and those which did not. When defects were created in the sinus floor, exposing the apices and even the trifurcation surfaces of the teeth to the sinus, such defects were not registered on conventional periapical roentgenograms.

Mitchell, D. F., Buoncore, M. G. and Shazer, S.: *Pulp Reaction to silicate cement and other materials: Relation to cavity depth. J. D. Res.* 41:3, 1962.

Class V cavities were prepared in 54 sound teeth in three monkeys and filled with one of the following: zinc oxide and eugenol; zinc oxide, eugenol, and croton oil; a proprietary silicate cement; the same cement with the acid diluted by  $\frac{1}{3}$  or a newly developed experimental silicate cement. After 7 days, 34 teeth were removed; after 42 days, the remaining 20 teeth were removed for study. After careful technological preparation, serial sections were studied. The cavity floors of 18 teeth were thinner than 1 mm., and those of 36 teeth were thicker. When the floors were thicker than 400 microns, all pulp reactions were mild. As floor thickness decreased, the reactions increased to moderate or severe, except in the case of zinc oxide and eugenol. As studied, the reactions to the other materials, including the experimental silicate, were comparable. The necessity for the use of deep cavities and for preparation of serial sections for such studies is again emphasized, so that the maximum response of the pulp can be ascertained.

Doyle, W. A., McDonald, R. E. and Mitchell, D. F.: *Formocresol versus calcium hydroxide in pulpotomy. J. D. Children* 2nd Quarter, 86-97, 1962.

35 primary teeth were treated, extracted after various intervals and studied microscopically. Another 30 teeth were treated and studied clinically.

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# Dean Hine reports that...

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Alumni will be interested to learn that the M. M. House exhibit material has been given to our dental school. Dr. James House, son of Dr. M. M. House, will join the dental school faculty July 1, 1963, and one of his first assignments is to organize and prepare for display the many beautiful skulls collected by his father, and the other material from the House museum which has particular teaching value. It goes without saying that we are pleased to receive this museum material because it will be of much value to our teaching program. Mr. Ivan Welborn, well-known dental technician, will accompany Dr. House to Indianapolis and assist in the preparation of this teaching museum.

Plans are now almost complete for the 1963 Senior Honors Day Program, to be held this year June 2 in the Student Union Building on the Medical Center Campus at 3 p.m. Alumni and friends of the dental school are always welcome to this event and each year the audience increases. Over two dozen graduating seniors will receive special honors and awards for outstanding academic and clinical accomplishments. Plan to attend this year!

The annual Capping Ceremony for the First Year Dental Hygienists is another noteworthy yearly event. This impressive program is usually held in the Student Union Building on the last Sunday afternoon in January. Recently the Second Year Dental Hygienists placed caps with one purple band on the First Year Dental Hygiene students, following a short address by Dr. George W. Helmbock of Evansville. Dr. Helmbock is the father of one of the 32 graduating hygienists.

While considering annual events, we wish to remind all alumni that the Dental

Alumni have a headquarters room in Chicago during the Midwinter Meeting every year and an Alumni Luncheon during the meeting. The room is very popular and serves as a focal point for the meeting of many former students of I.U. This is what the room is for, so plan to meet your friends there next year!

Also, the annual Homecoming of the Dental Alumni in Bloomington will be held this year Thursday, Friday and Saturday, October 3, 4 and 5. The football game on Saturday afternoon is with Ohio State University, so this should be a most interesting week end. The attendance is always good; reservations should be made early.

Faculty activities continue to expand. We noted that last year over sixty papers were published by faculty members. Faculty members also serve as editors of the Indiana State Dental Association Journal (Dr. Muhler), Indianapolis District Dental Society Journal (Dr. Mitchell), Journal of Periodontology (Dr. Hine). Dr. Healey continues to serve as the editor of the American Association of Endodontists Newsletter and Dr. Mitchell is an associate editor of the Journal of Dental Research. The teaching and research programs of the faculty are also much more extensive than ever before, since classes are larger and research opportunities more numerous.

The dental student Loan Fund is at a low ebb now, and yet we are receiving more requests from students than ever before. Donations are greatly needed, and can be used within days after receipt. Why not help a needy student by sending a check to the Indiana University Foundation for the Dental Alumni Association? Indicate it is to be used for dental student loan funds. The gift is tax deductible!

# Fall Alumni Conference

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*by Past President Jack D. Carr*

The experience of being President of the Indiana University School of Dentistry Alumni Association is one that I shall never forget. During this last year I have learned much about our great University and developed a tremendous respect for the officials who are responsible for directing it. In a way I was sorry to have the year come to a close; however, it was a pleasure to turn over the gavel to my good friend and new President, Dr. Robert Peden. I'm sure that he will enjoy this next year and will also receive the same fine cooperation from the officers and members that I received.

Our Fall Conference seemed to be a big success. It started with the golf tournament and as usual Dr. Jerry Leer did a fine job. The weather was just right for golf; however, some newly fallen leaves on the fairway slowed down the game of the thrifty players. Dr. Arnold Dunfee had the low net and Dr. Russ James the low gross.

The American Society of Dentistry for Children had a successful meeting on Friday morning. Their speaker was Dr. James R. Roche and he presented a practical evaluation of the chrome-alloy crown for primary molars.

Our athletic luncheon was held in the press box of the stadium so we were given fine opportunity to inspect one of the most modern football fields from top to bottom. President Stahr, members of the Foundation Board and some of the trustees were having some very important meetings; however, they took time out of their busy schedule to have lunch with us. The overlap of our meeting with theirs accounted for the shortage of rooms in the Union Building and we were sorry that many of our members were inconvenienced by having to get rooms rather far from the campus.

Our speaker at the luncheon was Mr. Eric Wilson, Director of Athletic Publicity of the State University of Iowa. He gave us a brief description of the Iowa team and enough information so that we could follow the individual Iowa players a bit better during the game on Saturday.

Dr. Miles Barton started his Varsity Club drive into high gear with a meeting immediately following the luncheon. Frank Jones arranged a short tour of the campus on our return to the Union Building for our afternoon session.

The ladies luncheon was held at the Union Building and their tour of the campus was a bit longer than the tour for the men. The changes on the campus are so numerous that I can't begin to describe them. All I can say to those of you who have not been to Bloomington recently is that you must see the campus in order to understand the tremendous development.

Our two afternoon lectures were most interesting. Mr. McCammon from Eli Lilly and Company described the control and testing of drugs before they are made available to the public. He also explained the effect that new government regulations will have upon the pharmaceutical companies. Dr. Paul Asher of Gary brought us some new information from a recent West Coast meeting on Dental Service Corporations. This is a very involved problem and deserves much more time than we were able to allot to it at this meeting.

Our business session was rather short. We allotted \$500 to the scholarship fund and another \$500 to the Varsity Club drive. A report by our treasurer indicated

an increase of about \$2,000 in our scholarship fund since our last meeting. This was accomplished through contributions to the I.U. Foundation directed to dental scholarships. Plans for encouraging further gifts to the Foundation are part of our program for this year.

The banquet attendance was approximately 220 people and I am pleased to report that the Union Building served a wonderful dinner. Dr. Hine was our speaker of the evening and made some very appropriate comparisons regarding the school of 1925 and our school today. The class of 1939 had the greatest number of alumni present and this fact was mentioned upon numerous occasions (by Dr. J. Carr, '39). Frank Jones and the School of Music arranged a wonderful

entertainment as the final portion of our evening.

Our Saturday morning brunch was so successful that we had an overflow crowd and had to set up extra tables. Dr. Vernon Forney of the U. S. Dental Public Health Service was our featured speaker. He had just returned from an extended tour of duty in South America and his description of the dental health problem was most interesting. He pointed out that the dentists of the United States could help solve some of the problems of the South American countries and at the same time aid in solving many other problems of understanding between our countries. Dr. Forney graduated from our dental school in 1939 and has been

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Alumni officers discuss plans for year. (Left to right). Malcolm Boone, Dean Hine, Robert Peden, Jack Carr, William Gilmore and Emory Bryan.

# Dental Hygiene

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*A Rebekah Fisk, Director*

*We were saddened by the news of the death of Mrs. Anna H. Fisk, mother of A. Rebekah Fisk, on February 2, 1963.*

R. W. P.

## Class of 1952

For this class we can only assume that no news is good news.

## Class of 1953

Not much from this group either. During the May Meeting the girls from Fort Wayne brought down the newspaper account of the lovely wedding of Mary Anne Keenan. Mrs. Mary Anne (Keenan) McDonald is now living at 3901 North Washington Road, Fort Wayne, Indiana. JoAnn (Nichols) Hearn is practicing in Kokomo, Indiana.

## Class of 1954

It was good to hear from Ted and Lenore Clarke again who are still stationed at Fort Sam Houston. They are living at 2930 Burnside Drive, San Antonio 9, Texas and have been busy doing some landscaping. Dorothy Robinson is now associated in practice with Dr. Walker Kemper in Indianapolis. Carol (Ottinger) Rosebrook is quite busy with her family but does find time to substitute occasionally for some of the practicing hygienists in Indianapolis. Marilyn (Meyer) Poel wrote that she was planning to take the National Board in December. Gerry Bailey wrote enthusiastically about the activities of her family. Bob was admitted to the State Bar of Texas and she is working three days a week. Her oldest daughter, Susan, is in the first grade.

## Class of 1955

We were pleased to have a visit from Mary Ann (Penn) Rolando and her family in the fall. We had an opportunity to meet Brenda Marie who was born on April 19 and Chuck who is four years old. The Klitzkes are still living in Texas. Doris passed the National Board and is working. Carol (Tucker) Reighley stopped in on her return trip from Europe. The Reighleys are now living at 345 Madison Street, Apartment 2, Denver 6, Colorado. Carolyn is working part time. We received the following address changes. Mary L. (Reed) Snead, 330 North Berkley Road, Kokomo, Indiana, Marian (Comer) Hawk, 18526 Fitzpatrick Court, Detroit 28, Michigan. Marian wrote that they have a new son, Matthew Comer Hawk, born in February.

## Class of 1956

From Judith (Patterson) Hodge we received a note in the spring "Got us a Girl," Loran Kay. The Hodges are now back from Hawaii and are practicing in Lafayette. From Janice (Clinton) Fryar we have a birth announcement. Cynthia Fay born in May. Janice's sister, Diane, is a first year dental hygiene student.

## Class of 1957

Jaclyn (Hite) Gray is president of the Indiana State Dental Hygienists' Association, and is busy making plans for the May Meeting. Mary Ann (Healy) Hogan and family now live at 10102 North Carrollton, Indianapolis, Indiana. Dr. Hogan is specializing in pediatrics in the Broad Ripple area. Janice (Miller) Compton is busy with her family but still finds time to work on a Dental Health

Education committee of the Dental Auxiliary of Hammond. They made fifty flip-charts and flannelgraphs for Children's Dental Health Week. Corinne Ann (Nowinski) Patton was very busy during the summer helping her husband with his politicking which paid off as George was elected to the office of Justice of the Peace for a four-year term. The Pattons have three children. Mrs. Margaret (Fixel) Schwartz' new address is 102 North "F" Street, Marion, Indiana.

### Class of 1958

Carol Ann (Guthrie) Fitch is still living in Virginia. Her husband is a student at Georgetown University and also teaches physics and mathematics at a high school. Carolyn Sue Messerve is associated in practice with Dr. Gardner in LaPorte. Sue (Kraybill) Kaiser is now living at 803 Meadowbrook Drive, North Tonawanda, New York, where her husband is with the Bell Aero Systems. The Kaisers like living in New York very much. New addresses for this class are Patricia (Nienaber) Obergfell is 331 East Tulip Drive, Indianapolis 27, Indiana, Martha (Coplen) Crawford is 106 Skyview Drive, Liverpool, New York and Ann Kay (Smith) Beechy, R. R. #2, Box 8, Kokomo, Indiana. Linda (Lobdell) Coleman took the National Board in December. Ann (Buche) Spedding has completed requirements and will receive her Bachelor of Science in Public Health Dental Hygiene in June.

### Class of 1959

Sandra (Klein) Alman and family including Robin Marcy who was born in November have moved to 2211 Washington St., Allentown, Pa. Jean (Bushong) Leyda has a son, Douglas, born in July. Dr. Leyda is a resident in oral surgery at Long Hospital. Carole (Temme) Leyda and family returned from Guam in July and are now living at 903 Walnut

Street, Waukegan, Illinois. Dr. Leyda is stationed at Great Lakes. Norrene (Martin) O'Malley is living at 402 Campus View, Bloomington, Indiana and is practicing part time. In September, "Labor Day," Nancy (Porter) Blackburn had twin girls, Jennifer Lynn and Joni Marie, and is now living at 74 Crestview, Greenwood, Indiana. She is associated in practice with Dr. Mishler of the same city. Jolene (Richetta) Dunbar has a son, Donald Robert, born in May—almost in the middle of the State meeting. Karen (Hueston) Woempner is living at 728 Alexander Street, Greenwood, Indiana. Nancy (Hammel) Fendley resides at 2894 South Fleming, Indianapolis, Indiana. Nancy has a baby girl, Beth Ann. Kay Camp was recently married to Joseph Kent Meyers and is living in Kokomo, Indiana. Carol Kay Gutwein was recently graduated from Bible School in Milwaukee and in February she will further her missionary training in Pennsylvania.

### Class of 1960

Judith K. Arnott is still in South Bend. Her new address is 417 South 36th Street, Apt. A-3. Judith V. Cunningham had a wonderful time on a trip to Europe which included the 13th International Dental Congress in Cologne, Germany. She also visited Switzerland, Italy, and France. We hope to see pictures of the trip at the May meeting. The new address of Jo Ann (Kritikos) Kirchoff is U. S. Army Personnel Center, Schofield Barracks, Hawaii. Dr. Kirchoff is on duty with the dental service. Marilyn (Lorenz) Peterson and family including daughter, Jane Ellen, born in April, now live at 931 West Main, St., Paoli, Indiana. New addresses are Karen (Nickas) Street, 635 Ladd Avenue, Bloomington, Indiana and Nancy (Patterson) Cornett, 300 S. W. "T" Street, Richmond, Indiana. Joyce (Perkins) Lavengood is now living at 907 Sherman Avenue, #302, Evanston,

Illinois and is associated in practice with Dr. Koch. Her husband is a commercial artist in Chicago. Roberta Jane (Polson) Maddock has a daughter, Kimberly, who was born in June. Jane is practicing part time in St. Clair Shores, Michigan. Wilhelmina Res was married July 21st to John Hubert Gelston Jr. at the Washington Memorial Chapel, Valley Forge, Pa. She is now working in the dental clinic at Fitzsimmons Army Hospital in Denver, Colorado. He address is 640 East Jefferson St., Englewood, Colorado. Joyce Schenek has completed requirements and will receive a Bachelor of Science degree in Public Health Dental Hygiene in June. Sally (Alcock) Pfafflin and Dr. Pfafflin paid us a visit during Christmas vacation. They are presently living in Dallas, Texas, but will enter the military service in the spring.

#### Class of 1961

Carol (Mager) Hurst is expecting her husband back from the Far East in January. Dr. Hurst will be stationed at Great Lakes until July and then they will look for a place to practice. Charlotte (Levan) Gross is living at 301 Chosin Circle, Oceanside, California. Dr. Gross is stationed at Camp Pendelton. Sarah Ellen (Perkins) Sheller is living at 2250, 96th Avenue, Apt. #123, Oakland, California. Karel Lee Engle has returned to South Bend. Cheryl (Johnson) Krachtlis is now living at 1939 North Lincoln Avenue, Chicago 14, Illinois. Patty Ann Koss returned to California to practice. Phyllis Joan (Ordway) Freeman married in the spring. Donna S. Ross is associated in practice with Dr. Pollack in Indianapolis. Alice Anne Schmitt resigned her position with Dr. Mishler in Greenwood and is planning a wedding. Patricia Yotter is president of the Central Indiana Dental Hygienists' Association.

#### Class of 1962

We had a very enthusiastic letter from Clarellen Simon who seems to like her

work in two dental offices in Colorado. She finds many interesting things to do around Denver. Her address is 4103 Montview Blvd., Denver 7, Colorado. Barbara Cohen, Hila Draper, Audrey Gotsch, Kay Robertson, Karen Masbaum, Judith (Spivey) Kight, and Marybeth (Lamble) Woehler are completing degree requirements and working in private dental offices. Karen (McCoskey) Beard has resigned her position in Evansville and will join her husband in Florida. Her address is 10849 Normandy Drive, Jacksonville, Florida. Geraldine (Kielbasa) Wadas is now living at 3901 North Humboldt Avenue #205, Milwaukee 12, Wisconsin. She is working for Dr. A. H. Bassman. Miss Carol Ann West is associated in practice with Drs. Goldsmith and Walter Dean. We received a very enthusiastic letter from Susan Wills who is now living at 10225 Kensington Parkway, Apt. 406 Kensington, Maryland. She enjoys working for Dr. Stevens and is active in the Maryland Dental Hygienists' Association. Lois (Stevenne) Pless is associated in practice with Drs. Robert Tarplee and Willard Samper. Wanda (Stevens) Lew is working for Dr. William Meeks. Carol Tufteland is working in Frankfort.

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The National Board Dental Hygiene Examination was given for the first time in April 1962. According to a report submitted by the Council of the National Board of Dental Examiners there are three aspects of the program which characterize it as an overwhelming success. First, from a statistical viewpoint the examination turned out to be much better than had been expected. Second, the number who took the examination far exceeded the estimates. Nine hundred eighty-four students or 84% of those eligible and 585 practicing dental hygienists participated. Third, is the recognition afforded by state boards. The Na-

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## NEW ACQUISITIONS

Among new acquisitions in the library during the past year were four volumes to be used in pedodontics purchased through a gift of \$50.00 given by Mrs. Mary Davis Bradshaw in memory of former Dean Frederick R. Henshaw. The gift was presented April 18, 1962 at the dedication of the new wing of the School of Dentistry Building at which time the name, "Mary Edith Henshaw and Frederick Rich Henshaw, Jr. Memorial Clinic for Children" was proposed for the children's clinic of the Indiana University School of Dentistry. Mrs. Bradshaw was registrar at the Indiana Dental College from 1914-1920 during the first years of Doctor Henshaw's deanship. The books were:

Benson, Clifford D.—"Pediatric survey." 2 volumes, Year Book Medical Publishers, 1962.

Meyer, Ruben and others—"Essentials of pediatric psychiatry." Appleton-Century-Croft, 1962.

Watson, E. H. and Lowry, G. H.—"Growth and development of children." 4th edition, Year Book Medical Publishers, 1962.

These gifts are sincerely appreciated as books like the Benson set, because of the cost, usually must be borrowed from another library instead of purchased.

Equally appreciated were the following books presented to the library by Dr. R. C. Beeler; the first in memory of Mrs. G. T. Gregory and the second in memory of Dr. B. K. Westfall:

Schram, Warren R.—"A manual of oral surgery techniques." Saunders, 1962.

Granger, Ernest R.—"Practical procedures in oral rehabilitation." Lippincott, 1962.

We were also most grateful for a second book, "Oral surgery," by Kurt H. Thoma, 3d edition, Mosby, 1958, presented by the Class of 1962 in memory of Mrs. G. T. Gregory.

Additional selected new acquisitions during 1962 were as follows:

Adams, C. Philip—The design and construction of removable orthodontic appliances. 2nd ed. Bristol, John Wright & Sons, Ltd., 1957.  
Adams, Raymond Delacy—Diseases of muscle. 2d ed. New York, Harper, 1962.

Adriani, John, ed.—Appraisal of current concepts in anesthesiology. St. Louis, Mosby, 1961.

Advances in cancer research. V. 5 & 6, 1958, 1961. New York, Academic Press.

Alexander, Peter—Atomic radiation and life. Harmondsworth, Middlesex, Penguin Books, 1957.

American Association for the Advancement of Science. The human integument, normal and abnormal. Washington, 1959.

American drug index. Philadelphia, Lippincott, 1962.

Anderson, John N.—Applied dental materials. 2d ed. Oxford, Blackwell Scientific Publications, 1961.

Andrews, Howard Lucius—Radiation biophysics. Englewood Cliffs, N.J., Prentice-Hall, 1961.

Archer, William Harry—Oral surgery. 3rd ed. Philadelphia, Saunders, 1961.

Aronson, Milton and Nelson, Robert C., eds.—Strain gage instrumentation. Pittsburgh, Instruments Pub. Co., 1958.

Bhaskar, S. N.—Synopsis of oral histology. St. Louis, C. V. Mosby Co., 1962.

Boyd, William—An introduction to the study of disease. 5th ed. Philadelphia, Lea & Febiger, 1962.

Brecker, Sol Charles—Crowns. Philadelphia, Saunders, 1961.

- Bregstein, Samuel Joseph—Handbook for dental assistants, hygienists, and secretaries. Englewood Cliffs, N.J., Prentice-Hall, 1961.
- Brogie, Louis—New perspectives in physics. New York, Basic Books, 1962.
- Burdette, Walter J., Editor—Methodology in human genetics. San Francisco, Holden-Day, 1962.
- Burket, Lester William—Oral medicine; diagnosis and treatment. 4th ed. Philadelphia, Lippincott, 1961.
- Burnett, George Wesley and Scherp, Henry W.—Oral microbiology and infectious disease. 2d ed. Baltimore, Williams & Wilkins, 1962.
- Caries Symposium Zurich—The present status of caries prevention by fluorine-containing dentifrices. Berne, Hans Huber Pub., 1961.
- Cawson, R. A.—Essentials of dental surgery and pathology. Boston, Little, Brown, 1962.
- Ciba Foundation—Metabolic effects of adrenal hormones. Boston, Little, Brown, 1960.
- Ciba Foundation—Regulation of the inorganic ion content of cells. Boston, Little, Brown, 1960.
- Ciba Foundation—Virus meningo-encephalitis. Boston, Little, Brown, 1961.
- Clark, George Lindenberg, ed.—The encyclopedia of microscopy. New York, Reinhold Pub. Corp., 1961.
- Cohen, Meyer Michael—Pediatric dentistry. 2nd ed., St. Louis, Mosby, 1959.
- Color atlas of oral pathology. 2 ed. Philadelphia, Lippincott, 1961.
- Crabb, Henry Stuart Malcolm and Darling, Arthur Ivan—The pattern of progressive mineralisation in human dental enamel. Oxford, Pergamon Press, 1962.
- Cronbach, Lee Joseph—Essentials of psychological testing. 2d ed. New York, Harper, 1960.
- Cullen, Stuart C.—Anesthesia. 6th ed. Chicago, Year Book Medical Publishers, 1961.
- Cutting, Windsor C.—Handbook of pharmacology. New York, Appleton-Century-Crofts, 1962.
- Defares, J. G. and Sneddon, I. N.—An introduction to the mathematics of medicine and biology. Chicago, Year Book Publishers, 1960.
- Denhoff, Eric and Robinault, Isabel Pick—Cerebral palsy and related disorders. New York, McGraw-Hill, 1960.
- Dobbs, Edward Clarence—Pharmacology and oral therapeutics. 12th ed. St. Louis, Mosby, 1961.
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- As in previous issues of the Bulletin in conjunction with the Library column, abstracts of twelve M.S.D. theses written in the Graduate School, Indiana University School of Dentistry follow.
- GROWTH OF THE FACE IN THE PRESENCE OF CLEFT LIP AND CLEFT PALATE—A REVIEW, Revere Arthur Nielsen, June, 1960**
- ABSTRACT
- The relative importance of congenital malformations, including cleft lips and cleft palates, is increasing. Approximately 1.5 infants in each 1000 births are afflicted with a cleft lip and or cleft palate. Swallowing, mastication, respiration, speech, and hearing may be markedly affected.
- Recent gross and microscopic studies of the growth and development of the normal and the anomalous individual have shed new light on the embryology, etiology, and clinical results of treatment of the cleft deformity.
- Both genetic and environmental factors seem to interact in an unknown, poly-factorial, and complex manner to result in a cleft lip and or cleft palate. The growth potential of the individual with this anomaly is not dissimilar to that of the normal individual. Both, also, are subject to variation.
- Today the infant with a cleft deformity, although presenting a complex challenge to those concerned with his care, faces a reasonably bright future.
- Much animal experimentation has apparently implicated a great variety of teratogenic agents. The application of these animal findings to man is, at best, an unwise procedure.

**VITAL TISSUE TOLERANCE OF DIFFERENT ROOT CANAL MEDICAMENTS,**  
Daniel Arefian, June, 1962

**ABSTRACT**

Eleven medicaments currently being used in the treatment of root canals were tested to evaluate their irritant potential. White male Wistar were used as test animals.

Evaluation was made on the basis of inflammatory cell count, edema, necrosis, and fibrocyte activity. Consideration was given to muscle degeneration and vascular changes. Due consideration was also given to the time factor. Microscopic sections through each specific injection site (abdominal or ventral, dorsal-shoulder and dorsal-pelvic) were made at 6 hours, 48 hours, 6 days, 16 days, and in some instances 32 days. Comparison was made between the different intervals. The findings were grouped as mild, moderate and severe.

The following were classified as mild irritants: Cresatin, camphorated monochlorophenol, eugenol, Zephiran chloride and Zonite. The moderate reaction group included: hydrogen peroxide, Gly-oxide and Chloramine-T. Beechwood creosote, cresol and formocresol were found to cause severe reactions.

The amount of the drug used was found to be an important factor in developing a reaction. It was noticed in some instances that if the amount of drug inadvertently exceeded the 0.1 cc. dose, ulceration developed. This did not occur in most instances when the dosage was exact. Even in moderate medicaments with an overdose, ulceration was not an uncommon phenomenon.

**THE EFFECT OF A DENTURE RELINE AND A DENTURE STABILIZER UPON THE BITING FORCE OF COMPLETE DENTURE WEARERS,** Malcolm Edward Boone, June, 1962

**ABSTRACT**

The effect of a complete denture reline and a denture stabilizer upon the static biting force of twenty complete denture wearers has been investigated. A clinical and patient evaluation of the reline and stabilizer was also recorded. As a control study the abilities of three patients to exert biting forces repeatedly at different time intervals was also observed.

Biting pressure measurements at a vertical opening of seven millimeters were recorded at several time intervals during a one month period on each side posteriorly and in the midline anteriorly, using a cantilever arm-resistance type strain gauge transducer and related electronic recording equipment.

Even though the performance of the group was improved following the denture reline, or when using the denture stabilizer, patient satisfaction cannot be explained entirely on the basis of increased static biting force, which did not occur for every individual and at other times seemed too slight to be significant.

The stabilizer was effective not only in the old complete denture prior to relining, but also in the better fitting relined prosthesis. Although most all patients were satisfied with the retention and stability of the relined denture, some felt that a denture stabilizer was of benefit to a denture wearer.

**A STUDY OF CERTAIN VARIABLES CONCERNING TARNISH AND CORROSION OF DENTAL GOLD ALLOYS,** George von Mohr, June, 1962

**ABSTRACT**

This was an investigation of certain variables concerned with tarnish and corrosion of dental gold alloys.

Variables studied included composition of the alloys, composition and pH of

storage media, influence of galvanic action, surface condition of the specimens and certain interrelationships between these variables. The methods employed included visual examination, color photographs, use of the Hunter Color and Color Difference Meter, as well as in some instances microscopic observations.

The results obtained did not always conform to the relatively few systematic studies published previously, nor to the clinical empirical observations reported.

Among the most important findings were the following:

1. pH of the media proved to have less influence on discoloration than previously assumed.
2. Under certain conditions the polished surfaces induced a stronger amount of discoloration than other forms of surface treatments studied.
3. In the single isolated series the burnished surfaces presented the most discoloration, followed by the sandblasted and polished surfaces. The pickled surfaces varied the least from their controls.
4. All gold alloys employed in the single metal and the dissimilar metal series, regardless of surface condition or media used, exhibited some color changes.
5. Gold surfaces in contact with amalgam generally discolored more than the single specimens.
6. Porosity areas definitely contributed to discoloration.

**SECONDARY DENTIN AND PULP REACTIONS TO SILICATE CEMENT IN THE TEETH OF MONKEYS, Abdel Hady El-Kaframy, June, 1962**

**ABSTRACT**

Class V cavities of varying depth were prepared in the teeth of four rhesus monkeys about 38 months old. The right teeth were left open for 3 months and then filled for 1 or 2 weeks with silicate cement. The left teeth were filled for

similar intervals with the same cement. After extraction and paraffin preparation, serial microscopic sections were studied.

In this study the reaction of the deciduous teeth to cavity preparation, exposure to the oral fluids, and filling with silicate cement was the same as that of the permanent teeth. It was shown that secondary dentin is a specific response of the dental pulp to peripheral irritation of the dentinal fibrils. The deposit closely corresponded to the tract of cut dentinal tubules. The secondary dentin was of a tubular variety and was well mineralized. Its thickness was directly correlated with cavity depth. Cavity depth was the most important factor in determining the amount of secondary dentin formed. The amount of secondary dentin deposited per month was calculated to be about 100 microns beneath deep cavities, and about 50 microns beneath shallow cavities in deciduous and permanent teeth. Secondary dentin afforded complete protection against irritation by the silicate cement regardless of the original cavity depth. A thick layer of primary dentin also afforded adequate pulp protection. Pulp injury became manifest when the cement was 100 microns or less from the pulp. Pulp reaction in teeth with cavity floor thickness of 100 microns or less was generally less severe after 2 weeks than in those teeth filled only for 1 week. Clinically undetected pulp exposures occurred in some of the very deep cavities and if serial sections had not been used, the actual exposure most likely would have been missed. Considerable variation in reaction in teeth with pulp exposure was evident in this study. This problem of the chronology of pulpitis, pulp necrosis and periapical pathosis needs further investigation.

**THE EFFECTS OF SIMULTANEOUS ADMINISTRATION OF ESTROGEN AND PARATHYROID EXTRACT UPON THE**

**TEETH, PERIODONTIUM, AND LONG BONES OF GROWING ALBINO MICE,**  
Richard Paul Elzay, June, 1962

**ABSTRACT**

There have been numerous reports on the histologic and radiographic effects occurring during the separate administration of estrogen and parathyroid extract upon the teeth, periodontium, and long bones. However, there are no reports describing what effects result from their simultaneous administration. The purpose of this investigation was to describe such effects.

Two histologic and radiographic studies were conducted. The initial study was composed of 4 groups, and the experimental animals of each group received estrogen from 4 to 12 weeks while the last group also received parathyroid extract for one week. The final study was composed of 1 control and 3 experimental groups. One of the estrogen groups, in addition, received parathyroid extract.

It was concluded under the conditions of the initial study that the dosage of estrogen was sufficient, and produced optimal endosteal proliferation between the 4th and 6th week of estrogen administration.

Under the conditions of the final study it was concluded that estrogen retards growth, produces endosteal proliferation with concomitant loss of marrow cavity space in the jaw as well as in the long bones. There was also noted a flattening of the epithelial interdental papillas.

**THE RELATION BETWEEN FORCE MAGNITUDE AND THE CENTER OF ROTATION IN THE MAXILLARY INCISOR,** LeRoy Howard Kulis, June, 1962

**ABSTRACT**

When a tooth is tipped, it moves about a center of rotation, but the exact location of this center has been the subject of much discussion and confusion. This study was designed to locate the centers

of rotation of upper central incisors by application of known forces to the teeth of fourteen patients. Records were taken to ascertain the rate of movement and pain threshold, and the axis of rotation was located by superposing accurate periapical films.

The results show that there is no significant difference in the centers of rotation when forces of 51 and 121 gms. were used. The teeth tipped about points located apically at 1.2 and 1.3 mm. from the centroid of the root for the two groups studied. The teeth moved most rapidly immediately following the first application of force, and then a lag period followed with no tooth movement. This was followed by a steady small incremental rate until the space closed. The pain threshold dropped greatly during the first day of tooth movement. The direction and type of tooth movement were able to be observed on the films.

Both the rate of movement and the pain response recorded concurred with observations made daily in the clinic.

This study was designed to test the validity of the Moment/Force Ratio used to locate the centers of rotation. The results obtained were very close to those found using this ratio, and therefore gave clinical support to this theory.

The conclusion reached by this study indicates that the procedure was able to accurately locate the center of rotation, found to be just apical by 1.2 to 1.3 mm. from the centroid of the root.

**THE EFFECT OF MOLYBDENUM ON FLUORIDE METABOLISM IN THE RAT,** George Kenneth Stookey, June, 1962

**ABSTRACT**

Several studies have suggested an anti-cariogenic action of molybdenum in humans and albino rats and molybdenum has also been shown to be related to phosphorus metabolism in a number of

animals. These reports prompted a series of studies designed to investigate the effects of molybdenum upon fluoride metabolism. The results of these studies clearly indicate an increased skeletal retention of fluoride in the presence of molybdenum supplementation. This effect was noted even when no fluoride was administered in addition to the low-fluoride content of the stock diet employed. It was further noted on the basis of metabolism and absorption studies that the effect of molybdenum upon fluoride metabolism occurs only as the animals approach maturity and that this effect is mediated through an increased rate of fluoride absorption in mature animals in the presence of molybdenum. The results of two caries studies did not clearly indicate an anticariogenic action of molybdenum alone; however, the combination of fluoride and molybdenum was clearly shown to be at least twice as effective as sodium fluoride alone in reducing the incidence of dental caries in the rat.

**A TORSIONAL ANALYSIS OF STAINLESS STEEL ORTHODONTIC WIRES, Thomas F. Mulligan, June, 1962**

**ABSTRACT**

Maximal torque and torque-twist rate were determined for straight lengths of wire. The effect of wire length on each was studied. Anti-rotational torque was determined for cuspid retraction springs, and finally, distal root torque produced by cuspid retraction springs and anterior retraction springs was determined.

Torque watch gauges in combination with a bunsen burner assembly and self-devised deflection scale were used to determine the data.

Maximal torque was shown to be independent of wire length, and closely approximated the theoretically determined values, while twist was shown to be proportional to wire length.

Pre-stressing followed by stress-relief produced the highest maximal torque values, while wires which received neither type of treatment exhibited the lowest values.

Torque-twist rate was determined for a number of wires commonly used in orthodontics both experimentally and theoretically.

It was shown that anti-rotational torque produced by cuspid retraction springs used in the Segmented Arch Technique was not only capable of preventing cuspid rotation during distal tooth movement, but could actually move the distal of the cuspid labially on the basis of theoretical mechanics.

Initial activation of anterior retraction springs used in the Segmented Arch Technique produces added distal root torque for the appliance when activated for distal tooth movement, while it appears that both cuspid and anterior retraction springs produce sufficient distal root torque to prevent root displacement.

**A CEPHALOMETRIC SKELETAL AND DENTAL ANALYSIS OF CHILDREN WITH EXCELLENT OCCLUSIONS, Malcolm Louis Rosenbloum, June, 1962**

**ABSTRACT**

A sample of twenty-five children with excellent occlusions between the ages of eight through eleven was collected. Cephalometric radiographs were taken of these children with the objective of obtaining normal standards for the purpose of compiling a cephalometric analysis especially applicable for diagnosis of malocclusions of the mixed dentition.

A statistical analysis was performed on the data to calculate the means, ranges, standard deviations, and standard errors of the mean for each measurement.

By the use of "t" tests, males were found to be significantly larger than females with respect to several linear measurements. However, there were no

significant differences between males and females for any of the angular measurements.

No significant differences were found between this sample and Reidel's sample, but, when compared to Downs' sample, the upper and lower incisors of this sample were found to be significantly more protrusive.

A correlation study of several pairs of measurements was also done. Significant positive correlations were found between the length of anterior cranial base and the length of the palate; and also between the lower facial height and the lower dental height. A significant negative correlation was found between the chin prominence and the angle of convexity.

**INDUCTION OF PRESSURE BONE RESORPTION IN ANIMALS USING PLATINUM-COBALT MAGNETS, Robert D. Wood, June, 1962**

**ABSTRACT**

The induction of continuous pressure bone resorption was attempted in the scapulae of rats and in the tibia of a monkey. Platinum-cobalt denture magnets were used as a source of continuous pressure. Experimental intervals ranged from 1 to 31 days in the rat, and 10½ months in the monkey.

Bone resorption attributable to continuous pressure was detectable microscopically in the rat scapulae after 3 days. Complete destruction of inter-magnet bone occurred after 7 days in some instances.

In the monkey tibia, definite bone resorption attributable to continuous pressure was seen both grossly and microscopically, without many of the complications that were observed in the rat study.

As suggestions for future studies of this nature, the author believes that a stress-bearing bone, as easily accessible as possible, and as flat in anatomical shape as possible, in an experimental animal

larger than the rat would be desirable and would improve the results considerably. Longer experimental intervals might lessen the complications of severe inflammation so often encountered, and if a thicker bone were used, the speed of resorption and its relationship to known forces could be evaluated better.

**A HISTOPATHOLOGIC STUDY OF RAT CONNECTIVE TISSUE RESPONSES TO ENDODONTIC MATERIALS, James Guttuso, June, 1962**

**ABSTRACT**

A number of materials advocated for use in endodontics have been introduced in the past few years, with little or no preclinical study of their compatibility with living tissue. Thus, an investigation of the connective tissue responses to ten commonly used or recently advocated endodontic materials was conducted. A controlled amount of the test material was surgically placed into the subcutaneous connective tissue in three areas of adult male Wistar rats. Following the test periods of two, sixteen and thirty-two days, histopathologic sections of the tissues surrounding the material were prepared and studied.

N<sub>2</sub>, N<sub>2</sub>, Medical, Proso-301 Root Canal Cement, Riebler Rosin, and Tubli-Seal Root Canal Sealer produced severe tissue responses (abscess formations). AN-26 and PBSC produced moderate responses. Kerr's Antiseptic Pulp Canal Sealer and Disket induced the mildest reactions of all the materials tested. No conclusions could be made about the Micro-Cide A Absorbent Points and Solution because the paper points used as control materials produced similar tissue responses. Although it does show accurately the differences in irritation induced by the various materials studied under comparable circumstances and emphasizes that a completely non-irritating endodontic material was not found.

# Alumni Notes

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Cleona Harvey, Recorder

Hello again from the Recorder's Office! Here in Indianapolis we are in the midst of such a prolonged cold siege as we cannot remember having ever before experienced—it has been cold, colder, coldest! And with snow and ice tormenting us in our travels to and from ye jolly old dental school! We know, however, that many of you are experiencing much the same unpleasant weather, others even worse, so we just won't say more about the weather!

Ah, well, the friendships we have formed with all of you fine people are warming to the heart in such a way that the winter cold can't compete, and the renewal of acquaintance with you all through your letters and your visits to the dental school brings us lasting pleasure.

We look forward to the spring when the State Dental Meeting is held and many of you will come to visit the dental school, drop in to say "hello" and to sign our "Guest Register." The school is still bursting at the seams with students here, there and everywhere, which of course means that the Recorder is a very busy person, looking after her "boys."

Don't forget, we're still looking for that letter from those of you who have not written for some time!

Well, we know that you want to hear news of your classmates, so here is news of the

*ing full time and am not making any plans to retire. I moved my office about a month ago and have a modern up-to-date office here. Culver City is a suburb of Los Angeles."*

## Class of 1903

We just received word this last December of the death in 1960 of Dr. Arthur L. Weaver. Mrs. Weaver informed us that he had practiced continuously in Ellensburg, Washington since 1903 and was at his office four days before his death.

## Class of 1907

Dr. C. A. Eller, 403 Pine, S. E., Albuquerque, New Mexico, made a trip in August, touring Alaska. He reported seeing three large glaciers and was impressed by the beauty of the country. He said the trees grow very slowly there because of the shortness of the growing season. While he enjoyed the trip, he said it was pleasant to get back home!

## Class of 1913

We regret to inform you that we received word from Mrs. H. E. Ginther that Dr. Harry E. Ginther passed away in Daytona, Florida in 1960. This office had never been informed of this, so we assume some of you may not know of it, either.

## Class of 1901

Dr. Alexander White, 10626 Venice Blvd., Culver City, California, writes, *"Your Alumni Magazine received some time ago for which I thank you. I graduated in the Class of 1901 and am practicing*

## Class of 1916

Dr. M. Vergel De Mios, 418 Sn. Nicolas Street, Manila City, (Binondo) Philippines, writes, *"I am a 1916 graduate of Indiana Dental College and always glad to receive the Alumni Bulletin."*

### Class of 1917

We received Christmas greetings from Dr. and Mrs. Carl Frech, Gary National Bank Building, Gary, Indiana.

### Class of 1918

We are sorry to report that Dr. Perry C. Garman passed away on August 2, 1962.

### Class of 1923

Professor Phillips received a most interesting letter from Dr. Sumner Pallardy, 1122 2nd Street, North, St. Petersburg, Florida, and wishes us to share it with you:

*"Just for the record, I had better let you know where I am located. As you no doubt know, I was retired on June 30, 1961 from Temple. Bea and I came to St. Petersburg and stayed a year, decided we like it here. Went back to Philadelphia, sold our home and now are 'Florida Crackers.' Had not had an Alumni Bulletin until recently, when I received two. I saw Jack Carr in Miami and he promised to have me put on the mailing list again. I enjoy them now more than ever.*

*"I thought it would be beyond endurance to have nothing specific to do but I find myself getting used to loafing very easily. 'I get up in the morning with nothing to do and go to bed at night with it half done.'"*

*"Seriously, I have found something to do at all times, taking care of the lawn and flowers, much fishing, and attending a good many dental meetings. I spoke to two dental societies last winter. There are several Indiana boys here and two or three from Temple. Have attended two Cleft Palate meetings. I don't want to lose contact with dentistry entirely.*

*"Bea and I are planning to be in Indianapolis for the May meeting this year. This is my 40th anniversary. Have you heard of any arrangements having*

*been made or anticipated for a 1923 Class Reunion?*

*"Keep the Bulletin coming, and it will surely be appreciated.*

*"See you in May, I hope."*

### Class of 1926

We received Holiday Greetings from Dr. and Mrs. Howard K. Maesaka, 509 Olive, Wahiawa, Oahu, Hawaii, and also a note suggesting that he may come to Indianapolis this next summer.

### Class of 1928

Received Season's Greetings from Drs. Leon and Evelyn Berger, 723 Main Street, Beech Grove, Indiana.

### Class of 1929

Dr. and Mrs. J. M. Sakurai, 2715 Tantalus Drive, Honolulu, Hawaii, sent Christmas greetings.

### Class of 1932

We received an interesting letter from Dr. Harold C. Asher, 689 Black Oak Ridge Road, Wayne, New Jersey, which we are quoting in full:

*"As usual, I fully enjoyed reading the last issue of the Alumni Bulletin which arrived this past week. You and the rest of the staff are to be commended for doing such a fine job for our benefit. I really appreciate it.*

*"A few years back, I wrote a little note to you and it was subsequently published; in this note I casually referred to the members of our class as being 'old timers' as compared to the more recent graduates. I don't remember whether it was the very next or the second issue after that, I noticed a caption on an article to the effect, 'Who does this Asher think he is?' Needless to say, I read the article and in it I was thoroughly slapped down and had my ears pinned back to a no uncertain degree. The author was a member*

of the class of 1909. To him, I was just a young upstart of a kid.

"I may be a young upstart of a kid but a fact has been brought to my attention lately that I find hard to believe. I am amazed to learn that graduates within the last fifteen to twenty years have never so much as seen, much less used, a dental foot-engine. They won't believe that such a thing was ever used by a dentist. One of these fellows is Dr. George White (Class of 1949). Dr. White claims he has never seen one and I asked him if there isn't one on display there at the school. He says that if there is one there he never saw it. If this is so, might I suggest that somebody dig up one of these relics and put it on permanent display so that these embryo dentists (present and future) might see what we 'young upstarts' used while students and to take our State Board examinations?

"It was a real thrill to get back to Indianapolis last May 22 to attend my class's 30th reunion. I could hardly consider it a real visit because I arrived in town about 11 A.M. and left at 3:30 P.M. the same day, but during those four and a half hours I had the chance to see and have lunch with seventeen of my classmates, none of whom I had seen since our 25th reunion five years previous, and this made the trip well worthwhile."

Dr. and Mrs. S. Nakamori, 908 North King Street, Honolulu, Hawaii, sent Christmas greetings.

#### Class of 1935

Dr. and Mrs. M. J. Bean, 224 Elm Avenue, Hackensack, New Jersey, sent Christmas greetings with this note, "Thought you might like to know that Sandra will be graduating from I.U. School of Education this June and Richard has started his freshman year. We are looking forward to the time when he will be on West Michigan, too!"

#### Class of 1943

Dr. R. Quentin Royer sends us a change of address to 123 Atlantic Avenue, Long Beach 1, California.

#### Class of 1946

We received Christmas greetings from Dr. and Mrs. Charles L. Howell, 1121 West Michigan Street, Indianapolis, and I am mentioning this because some of you may not know that Dr. Howell is now Assistant Dean of the Dental School.

#### Class of 1947

Dr. and Mrs. Marvin Tuckman, 64 Hamilton Street, Paterson, New Jersey, sent Christmas greetings.

#### Class of 1948

Received Christmas greetings from Dr. and Mrs. Robert H. Marlette, 845 Scranton, Aurora 8, Colorado, with the following note:

"We are most happy with our assignment at Fitzsimmons Hospital. Bob saw several I. U. Alumni at the Oral Surgery Meeting in Chicago—Drs. Muhler, Alling, the Moss Brothers and Dean Hine."

#### Class of 1949

Dr. and Mrs. Ernest Rosenthal, 1266 Oliver Avenue, Indianapolis, sent Christmas greetings.

#### Class of 1951

Dr. Raymond R. Price asks that we change his address to 3166 Reid Drive, Suite 5, Corpus Christi, Texas.

#### Class of 1953

Dr. and Mrs. William Crawford, 4233 East 38th Street, Indianapolis, sent their good wishes for the Holiday Season and the New Year.

Dr. Henry Plaschkes, 2334 North Delaware Street, Indianapolis, also sent Holiday Greetings.

#### Class of 1954

Dr. and Mrs. Robert C. Johns, 38 Hatcher Road, Eglin AFB, Florida, sent a photographic Christmas card, showing a wonderful picture of their three boys, Mark, David and Bobby.

Dr. and Mrs. David Amos, 5201 West 22nd Street, Indianapolis, sent Christmas greetings.

#### Class of 1955

Drs. Ursula and Werner Bleifuss, 18786 San Quentin Avenue, Lathrup Village, Michigan, also sent us their best wishes for a joyous season and Happy New Year.

Dr. and Mrs. Stuart J. G. Everard sent Christmas greetings, with this note:

*"This Christmas is a good one for us as I have just returned from three weeks in the hospital—had a cerebral hemorrhage with paralysis of left side at Thanksgiving. Physiotherapy is doing a lot but I am developing some new techniques."*

#### Class of 1956

Dr. Young Ok Lee, Seoul University Dental School, Seoul, Korea, sent us a most interesting Christmas card.

Dr. and Mrs. Pedro G. Colon, Box 36, Naguabo, Puerto Rico, also sent greetings.

Also received Christmas wishes from Dr. and Mrs. Robert Owens, 1706 Highland Park, Fort Wright, Kentucky, with this note:

*"Greetings from Kentucky! Hope this card finds you all well and in the old yuletide spirit. All's well here. We were blessed with a boy on July 3—didn't know what we were missing."*

*"Practice is fine, but miss all at school; would like to get back and see everyone and the new addition. Hope all of you have a Merry Christmas and a Prosperous New Year!"*

#### Class of 1957

Dr. and Mrs. Waldo Scales, 411 Exchange Bank Building, St. Augustine, Florida, sent such an unusual Christmas greeting that we are just copying the entire letter for your enjoyment.

*"Another year has quickly passed in the Scales' household. We are still located in the ancient city of St. Augustine and are slowly but surely becoming acclimated to Florida. We moved into a new house this fall and are enjoying the location and room. The kitchen is all electric. The dining room and livingroom are combined but quite functional surrounded by concrete blocks which are turquoise in color and white frame and glass. We are located in the division which is called 'St. Augustine South' located on the inland waterway which is covered with beautiful trees. After living in Florida you soon find that big trees are very precious and indeed a luxury which are so appreciated because of their beauty and shade. Our home is furnished with Early American furniture (maple) decorated in oranges and browns. We have a beautiful fireplace in our home and the Scales love to sit quietly (if patients will allow) in front of it on the cool evenings to watch the wood crackle in its brilliant red flames."*

*"Our dental office is about the same as it was last year. The reception room is still furnished with Danish modern furniture in colors of orange, beige and ivory. We did redecorate the operatory rooms in shades of light blue. Waldo also equipped another new operatory this past year—Ritter—in Ritter blue. We both attended the famous Puritan Lecture course given this last spring by Puritan*

himself, coming home much inspired and full of ideas ready to re-educate the public on dental education.

"We have had a happy year and much to be grateful for but we have not had too healthy a year. I had another miscarriage in March (a big boy), Billy had some intestinal upsets that made him quite ill at the time; Waldo had some fungus infections on his chest and shoulders which required a series of skin treatments. I had a staph infection on my hands, and Waldo was quite seriously ill and hospitalized for almost three weeks with a Renal Colic attack (kidney stone). This all came about in the middle of September. He was first taken to the hospital here, Flagler. After the diagnosis was made they found they could no longer help him so they sent him to the St. Vincent's Hospital in Jax to be under the care of the kidney specialists from Mciver Clinic.

"You can imagine the household was in a great state of confusion with Waldo in Jax and so ill, and I was trying to run back and forth to keep an eye on the office and yet be with him. To make matters worse here my regular baby sitter had gone on vacation, so she was not here to help me with Bill. I finally had to take him to Waldo's brother (Kenneth) and leave him so he could get his rest and be on a schedule. After many painful days in St. Vincents, Waldo was released to come home, on out-patient status, but not to go any further away from Jax than St. Augustine, and many other restrictions too numerous to mention. The three Scales' were finally united again, giving thanks to the good Lord for letting us be together as a family. Waldo still does not have the strength and endurance he once had but is going full force at the office. . . . William Waldo (Billy) is now two years old, weighed 28½ lbs. and was 35½ inches tall at his two

year check. . . . He truly is the little 'run-about'. . . . He can throw and kick a ball . . . builds with blocks, pulls open all the drawers and delights in stuffing in and out . . . He is still in the negative stage and says 'no' to almost everything. He loves to say 'Mean, mean Mamma' and 'Good, good Daddy.' You can guess who gets a bang from this. As the poem goes, 'His cute remarks, in which we pride, Are whispered in a low aside, But words we'd rather none would hear, Are always shouted, loud and clear' This is a perfect description of our son Bill.

"Waldo is Vice President of Band Boosters this year so that keeps him busy during his spare time helping the youngsters sell candy to buy new uniforms, etc. . . . I work at the office one to two afternoons a week plus working on collections at home.

"This beginning Christmas Season has found us recovering from the Cuban Crisis, and busy with all the gala activities that are so expectant at this time of year.

"Let us hear the news from yo' all.

"May you have a warm and joyous Christmas with much happiness throughout the New Year."

Received Christmas Greetings from Dr. and Mrs. George Von Mohr, and son, Eric, 421 North 9th Street, Blythe, California.

### Class of 1958

We received a note from Dr. Robert L. Mattern informing us that his present address is 174 West Maple Street, Wabash, Indiana, with office at 645 North Spring Street, Wabash. Somehow we had failed to receive a change of address from Mississippi and he had not been receiving his Bulletin. We hope that now it comes through in good time, Dr. Mattern!

Dr. G. B. Shankwalker, Government Dental College and Hospital, D'Mello

Road, Bombay 1, India, sent Season's Greetings.

Dr. Kurt F. Stempel sent us an announcement that he is limiting his practice to oral surgery at 1122 Shelby Street (Fountain Square Professional Building), Indianapolis, Indiana. He served his Internship at Cincinnati General Hospital and his Residency at the University of Texas Medical Center, Galveston, Texas.

Dr. Alegria C. Zita Ging, 1357 Felina, Parv, Manila, Philippines, sent Christmas greetings.

#### Class of 1959

Dr. Larry Hodges came in and reported he is taking over Dr. Price's practice in Lafayette (2211 South Street, Lafayette). He spent three years in the Navy and was stationed in Hawaii (Barber's Point). He has three children, Jeff, aged 4, Brett, 14 months, and Lauren, 9 weeks.

We received a change of address for Dr. Robert B. Purdy to Post Office Box 553, Paso Robles, California.

Dr. Hala Zawawi Henderson, P. O. Box 849, Kuwait, Arabia, sent Season's Greetings with a note saying,

*"Walter joins me in wishing you and all my friends at I. U. School of Dentistry a very Merry Christmas and happiness throughout 1963. I did enjoy my visit to I. U. School of Dentistry earlier this year and my only regret was that it had to be so brief. I could not help but marvel at the progressive changes that had occurred during less than four years?"*

#### Class of 1960

Dr. Warren Bailey Davis, Director, Riley Dental Clinic, Riley Hospital, Indianapolis, says,

*"Just a note for the Alumni Bulletin. The Class of 1960 was well represented at the annual Indiana-Purdue football game in Lafayette this year. Members of the*

*class and their wives in attendance were Drs. John Libke, Ralph Adams, Jim Meyers, Robert Spedding, Richard Carl, Billy Coppes, Lon Rooksby, Tom Connel, Tom Shaver, Bailey Davis, James Heninger and Richard Henry. The group certainly enjoyed seeing the Hoosier victory. Everyone decided that this would be a great time to get together each year and we're looking forward to seeing more members of the Class of '60 at the next meeting of the Boilermakers and the Hoosiers.*

*"It will be necessary to make reservations several months in advance, so anyone interested should contact Bailey Davis, care of Indiana University School of Dentistry."*

Dr. and Mrs. Richard Elzay, Department of Oral Pathology, Medical College of Virginia, Richmond, Virginia, sent Season's Greetings.

Dr. and Mrs. Zack Kasloff and family, Winnipeg, Manitoba, Canada, sent Greetings.

Dr. and Mrs. Earl Ley and daughter Cindy Jo, 1006 South Brentwood, Indianapolis, also wished us a Merry Christmas and Happy New Year.

Dr. and Mrs. Philip O'Shaughnessy, 1125 West Wildwood, Fort Wayne, Indiana, sent Greetings.

Captain Peter R. Reibel, 86th TAC Hospital, Box 196, APO 12, New York, New York, sent us Season's Greetings—in German!

Dr. Dilia Rieser, 1022 Villa Avenue, Indianapolis, Indiana, sent Best Wishes for a Merry Christmas and a Happy New Year.

#### Class of 1961

Dr. James F. Bennett, 230 Laurel Drive, Tobyhanna, Pennsylvania, wrote as follows:

*"Sorry for the delay in answering your letter, but as you can see from the address*

on the letterhead, I have moved from my previous residence and my mail is sometimes a little slow in catching up with me. . . . As far as my personal life goes, many things have happened to me since leaving school. I practiced a year in Louisville, Kentucky and was then drafted as a Captain into the Army. I was drafted along with about 150 others during or resulting from the Berlin Crisis. I am now stationed at Tobyhanna Army Depot. This is a small Army signal depot which is located in Northeastern Pennsylvania in the Pocono Mountains. It's about 30 miles south of Scranton, Pa. My wife and I are both in good health and have a new addition to our family as of May 8, James Gregory. . . . Tell everyone hello for us."

We have a change of address for Dr. Paul I. Lew to 31 South Audubon Road, Indianapolis, Indiana.

And a change of address for Captain Donald L. Tyler, USAF Hospital Tachikawa, APO 323, San Francisco, California.

Dr. Robert Winkler, P.H.S. Indiana Hospital, Sacaton, Arizona, wrote us quite a lengthy letter and we are pleased to be able to pass it on to you.

" . . . Deanna and I are very proud of our new little girl, Dawn Elizabeth, who was born on September 22. Now we have a new 'playmate' for Vick and Bobby.

"I am now all set up to take the California Board in January and have been studying review books and old examinations in preparation. Dr. Hine's Review of Dentistry is excellent and it helped me greatly in preparation for the Arizona Board. Deanna bought it for me as a Christmas present last year so it came as quite a surprise to me then.

"We were in San Francisco for one year in the Public Health Service Internship there and we are now serving our military obligation with the Division of

Indiana Health here in Sacaton which is just outside of Phoenix. Our duties here are many. Of course, first of all, we take care of any dental emergencies which may come into the clinic along with helping with many accident cases which are brought into the hospital. Our dental staff here is one dentist (myself) and one dental assistant. We have a modern, well-equipped two-chair clinic which is located in one of the wings of the hospital. In addition, the clinic has a private office, laboratory and darkroom. We also service two auxiliary clinics in the surrounding area. As you can imagine, there is a large work load here and we are able to keep busy all the time. The training I received both at I.U.S.D. and at San Francisco has been very helpful to enable me to meet my responsibilities here at Sacaton.

"You are probably wondering where we live. We have a partially furnished air conditioned three-bedroom home which is just a 'stone's throw' from the hospital and my clinic. Of course, we no longer need air-conditioning here as the weather for the last two months (his letter was dated November 25, 1962) has been just wonderful . . . warm, balmy days and cool evenings. I imagine we deserve the good weather since the hot days and nights of July and August. Ha!

"Both my wife, family and I are looking forward to returning to good ol' Indiana in May. We hope to be able to come during the time of the Annual Meeting and see the 'new dental school' there. Dr. Gilmore told me I probably would not recognize the main clinic any more!"

Dr. Alphonso Trotman, AO 3113297 Box 384, 727nd USAF Hospital, A.P.O. 231, New York, New York, wrote to us as follows: "I have finally decided that now is the time to do what I have intended to do for the past six months—write to you!"

*"I am stationed with the United States Air Force in Tripoli, Libya, North Africa. The most pleasing thing about Tripoli is its weather which is comparable to that of Southern California. It's an old city which has an interesting history and a diverse culture.*

*"After I graduated, I married a wonderful girl whose name is LeGrande; and we have another wonderful girl whose name is Yolanda Paulette. They are both with me in Tripoli.*

*"We have a very nice clinic which is fairly modern. The air conditioning is what we appreciate the most, and it's in use about eight months of the year. The clinic is a large one with a staff of thirteen dentists.*

*"So far, my tour in the service has been a tremendous asset. It has given me the opportunity to practice many phases of dentistry and has also aided me in gaining a vast amount of speed and proficiency. Practicing dentistry in the military certainly has its advantages, but I am still eagerly looking forward to private practice.*

*"I cannot express how much I appreciate receiving the Alumni Bulletin. It's like receiving a letter from home.*

*"Please give my regards to everyone."*

Dr. and Mrs. Arnold M. Wuebbenhorst, 2300 Seacrest Blvd., Delray Beach, Fla., sent their best wishes for the Christmas Season and the New Year.

#### Class of 1962

Dr. Norman E. Chamberlain, 2412 Martinwood Drive, Orlando, Florida, writes *"Before I get too engrossed in my own problems, I would like to express a humble thanks for some of the happiest years of my life. I hope the future will continue to bring the same happiness which has been made possible by 'you-all.'"*

Dr. Howell, Assistant Dean, received the following note from Dr. John F. Hasler, 525-B Philmar, Springfield, Pennsylvania, and turned it over to us for our column:

*"Just a hello and a note of thanks for helping me with such a fine program as the PHS. The clinic is fantastic in all respects and the working conditions are ideal. There are five new Ritter units and power chairs just to help out. The other fellow came from University of Maryland and is of very high character and ability. He took an internship at San Francisco. We have a fine woman for an assistant and nurse. We haven't heard much from Staten Island yet but expect a visit any day. Our patient load is very high right now, but I'm sure we can keep up with it. . . . Hope to be back in Indianapolis soon."*

Dr. and Mrs. Larry D. Jones, 4501 Arcadia, Indianapolis, Indiana, sent Greetings of the Season.

Dr. Myron J. Kastle, 551 South Fleming Street, Indianapolis, sent this office address for our records, along with *"Best regards to everyone."*

Dr. John E. Neville, Jr., sent us an announcement of the acceptance of the Dental Practice of A. Cameron Mackenzie at Suite 201, 655 North Central Avenue, Glendale 3, California.

Dr. Bernard A. Newbauer, 7576 Pen-dleton Pike, Indianapolis 26, Indiana, wrote to notify us of this new office address, saying also that he would appreciate notification of any and all up-coming postgraduate courses and alumni events. We certainly shall keep you informed, Dr. Newbauer!

Dr. John M. Ring, informed us of his change of address to 143 Shirley Drive, Waco, Texas.

Dr. Howell received an interesting letter from Dr. J. Keith Roberts, Marine Corps Supply Center, Dental Dispensary, Albany,

Georgia, and gave it to us for inclusion in this column:

*"As you well know, I am stationed as a Navy dentist at the Marine Corps Supply Center here in Albany, Georgia. I am thoroughly enjoying my dental experience here. There are 1400 men and three dental officers located here. . . . I am more and more of the opinion every day that the services have unlimited value in additional experience which is the best possible thing for a man fresh out of school. I have learned more here in two months than I knew existed outside of the dental school curriculum. All in all I know that I will be much better off in the long run having had this experience behind me.*

*"I just heard that Dick Buchanan is in Chillicothe, Ohio and is a USPHS dentist at a federal reformatory."*

Dr. Edwin Sakurai, 2715 Tantalus Drive, Honolulu, Hawaii, sent us Season's Greetings.

We have received a new address for Dr. Carolyn Sewell (now Mrs. Ronald Yamaoka), 1354 North Arlington, Indianapolis 19, Indiana.

We have had two letters from Dr. Thomas L. Sherman, PHS Alaska Native Clinic, Fort Yukon, Alaska. And they are so very interesting we are quoting most of both of them for you:

*"The dental situation is, in a word, challenging. I am responsible for an area in Alaska about five times as big as Indiana. I am here primarily to serve the native population with special emphasis on the children.*

*"Soon, my assistant and I will leave Fort Yukon (September) to begin our field trips to the remote villages. All travel will be done by air, landing on wheels, skis, or floats, as weather permits. All dental equipment will necessarily be of a portable nature. The dental neglect is particularly evident among the children,*

*and, upon first impression, seems to worsen progressively and profoundly in the younger age groups. Many situations unlike anything known to me before are being encountered, and I find my texts my closest ally coupled with the knowledge and experience I have gleaned from my formal education.*

*"Due to the large number of cases treated, as well as rules and restrictions, I must abide by myself, I have treated many patients in a manner that I realize is not ideal. However, when the circumstances are all considered, I feel the Indians are infinitely better off now than a year ago when no dentist was here.*

*"One of my other duties is cooking my own meals—I see my supper is in dire need of attention, so I'd best sign off. Say hi to the good Hoosiers for me."*

Dr. Sherman's second letter was written later, after he had left Fort Yukon, and reads as follows:

*"I'm out in the bush struggling to do dentistry on 160 neglected Indians. The new experiences I encountered both dentally and otherwise are like nothing I have ever seen before.*

*"I really believe that the only salvation for these people will be based upon a firm foundation of prevention. A portion of our preventive supply is gone till spring thaw. As our supplies were being transported by dog sled from the airstrip to the little village of Hucia, a few items fell off into the snow. We recovered most everything except a portion of our SnF<sub>2</sub>. We have some on order from Anchorage that probably won't have returned by the time we return to Tanana, our base of operations. We have yet to visit the village of Hughes and will run short of our supply.*

*"I'll write a long letter on all my experiences as soon as I have a chance."*

Dr. Nelson Wolfe, Dental Clinic, Alaska Native Hospital, Barrow, Alaska,

wrote quite some time ago, but too late to be included in the last issue, as follows:

*"I could pretend that it's so cold here that I can't type but that's not true. It is a comfortable 39 or 40 degrees. We have had beautiful weather (at times). We had a couple of days in the high 60s and low 70s. The natives were about to die from the heat! The daylight hours at night are usually much nicer than during the day. The midnight sun is still about in a 9 o'clock position (a.m. Indiana comparison)."*

*"We spent ten days in Anchorage together with Tom Sherman. It so happened that he got on the same plane with us at Seattle. We sat together enroute from Seattle to Anchorage. We hadn't seen each other since graduation. We had hoped to stop in Fairbanks long enough to get out to the air base where Bill Border is stationed, but we were too eager to get to Barrow to take the time. Living out of a suitcase without a place to call home gets tiring at times! Anyway, it was Fairbanks before we parted company with Tom Sherman and Bill will be catching a 'hop' up here some time to be an overnight guest."*

*"We didn't get to Barrow until the 12th of July. The ice was still covering the ocean shore. Two days later it was gone when we got up. I don't have time to mention all of my impressions, events, etc., since we arrived, but we both are very pleased at being here. I've been walrus hunting, seen several whales, seals, and thousands of ducks!"*

*"The dental clinic is small, but well equipped (modern), and I have a very efficient native assistant with six years of experience."*

*"I did see Dick Rollins in Denver while we were taking the Colorado State Board exams. I got the good news that I have a license in Colorado after I got up here! So hurrah!"*

*"If you have Bud Wentz's address in San Antonio, I would appreciate it if*

*you would send it to me. He promised to write me first. Since I haven't heard yet, maybe I can embarrass him by writing first. Also, would you ask Bob Witham if he is going to write or just intends to?"*

*"I notice you said to write all about everything so that you could put it in the Bulletin. I have by no means even scratched the surface and certainly didn't edit this for publication. I'll leave that up to you."*

*"Give my regards and hello to all who are concerned about my surviving the cold north!"*

Then, at Christmas, we received the following wonderful Greeting from Dr. and Mrs. Wolfe, which they had duplicated for sending out to friends. Just in case you did NOT receive yours, we quote it in its entirety.

*"As Christmas approaches, we naturally reminisce over the year's events. We have traveled thousands of miles and experienced many new and unexpected things since December, 1961."*

*"Changing from teacher and part-time housewife to full-time homemaker has given me time to muse while working, if not time to accomplish many of my duties and goals. Of course, Nelson's promotion from dental student to Doctor of Dental Surgery was a big occasion in our lives. Being licensed to practice in Indiana and Colorado culminated four difficult but worthwhile years. At the beginning of those four years, we never dreamed we would be spending Christmas of 1962 at the 'Top of the World' in the U. S. Public Health Service. Yet, this is where the Lord has led us."*

*"The most difficult thing about leaving home was saying goodbye to friends and loved ones. However, we still feel a closeness in spirit and love and will carry an influence of these relationships with us always."*

*"We have made additional friends in these last few months, friends whom we*

*(Continued on page 49)*

# Who's Who and Where ???

*Dr. Paul Starkey*

HURRAY—It's back! !—but you don't need me to tell you that. What you might be interested in knowing, however, is that the fellow you see sitting on the desk and examining the bucket and the chain is an alumnus who is often asked if he is really loyal to I.U. as far as her football team is concerned. He is Dr. Jack Mollenkopf, Jr., son of you know who.



Jack Mollenkopf and the Bucket.

Dr. Jack received his D.D.S. degree from IUSD in 1961. The following year he served full time as a public health dentist with the Dental Division of the Indiana State Board of Health. Much of this time he spent acting as a consultant to local dental societies and in helping to set up programs for providing mouth protectors to high school football players. As you know, it became mandatory this Fall in Indiana that all high school and junior college football players wear mouth protectors.

Just recently Jack has begun the private practice of dentistry in Lafayette but continues to serve 2 days a week with the State Board of Health. He is currently making a survey of all the high schools in Indiana who participate in football in an effort to help improve the mouth protector programs for the coming year.

With his father the football coach for Purdue and Jack himself an alumnus of I.U. it isn't hard to understand why people occasionally question his loyalty. I asked him, "Just how is it Jack?" and at the same time eyeing the Jawn Purdue button in his lapel. His reply came back readily, "Dad always says 'B'ood's thicker than alma mater.'" (The picture has been cropped so that you can't see the armed guards.)

Honor came recently to Dr. D. Robert Lindborg of South Bend when he was elected a member of the Board of Directors of Wittenberg University, in Springfield, Ohio. Wittenberg University is supported by the new merged Lutheran Church in America, and includes The Hamma Divinity School. The University's total enrollment is approximately 3500.

Bob is a graduate of IUSD with the *great* class of 1943. He served with the Navy on an aircraft carrier after graduation and then began the practice of general dentistry in South Bend. He has been a very active person in his community, working with the Boy Scouts of America, participating in Kiwanis Club activities, serving the profession through his local society, and particularly working in the church.

He played a very active role on the Indiana-Kentucky Constituting Convention Committee which prepared for a recent large merger within the Luthern Church



Dr. Robert Lindborg.

and he is presently the president of the Board of Directors of the Luthern Student Foundation for Purdue University. He is also president of the St. Joseph County Dental Society and was elected last fall to *your* Board of Directors of the Indiana University Alumni Association.

His charming wife is Millicent and the Lindborg family includes four sons, Daniel, 14; Dick, 13; Doug, 11; and David, 10. Their Christmas cards are usually a photograph of the family with a caption, "Millie and her Men."

Indiana University School of Dentistry is proud of her graduates who make such a mark and contribution to their community. It is this type of service that brings much prestige to our profession. Congratulations, "Swede."

The Association of American Women Dentists honored Dr. Betty J. Koss October 29, 1962 by electing her their president for the coming year. She received her D.D.S. degree from Indiana

with the class of 1951. The objectives of the A.A.W.D. are to promote good fellowship and cooperation among its members and to aid in the advancement of dentistry. It was founded in 1920.

The original purpose of this organization was social, but Dr. Koss tells us that in recent years, the theme of the A.A.W.D.'s program has been to further women's interest in the dental profession. One of its projects for the coming year is to continue the activation of the Gillette Hayden Loan Fund which the A.A.W.D. established in 1930. The fund has been financed by voluntary contributions. The purpose of this Fund is to provide loans to worthy junior and senior women students in dental school. Each recipient can borrow up to \$1000.00.

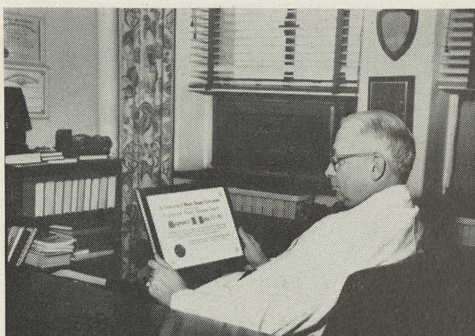
Dr. Koss received an A.B. degree from Butler University in 1946 and did post-graduate work at I.U. in Pedodontics. She has been a practicing pedodontist in Indianapolis since 1951. Along with her many professional memberships, she is a member of Chi Omega Sorority, Zonta International, Daughters of the American Revolution and is on the Mayor's Committee on Juvenile Delinquency and the Advisory Committee to the Indianapolis Police Department. In 1960 she was a delegate to the World Convention of the Church of Christ at Glassgow, Scotland. Her hobbies include the breeding and showing of her Longhaired Dachshunds. CONGRATULATIONS, Dr. Koss.

The American Association of Women Dentists also honored another woman alumnus of IUSD by electing Dr. Delia Rieser their secretary-treasurer. She received her D.D.S. degree with the class of 1960 and earlier, an A.B. degree in Zoology. She did all of her pre-dental training at Indiana University. Dr. Riesser was a recipient of the Gillette Hayden Loan Fund during her senior year. Since graduation, she has been a staff dentist at Muscatatuck State School

and is associated in the private practice of general dentistry with Dr. William Dudley in Indianapolis.

Her professional affiliations include membership in the American Society of Dentistry for Children, Upsilon Alpha Dental Sorority and the A.A.W.D. She is very active in her church and has recently been initiated into Zonta International. Her hobbies are oil painting and reading. CONGRATULATIONS TO YOU ALSO, Dr. Rieser.

It seems appropriate that we recognize in this particular column that our Dean has been honored by another University's alumni association. During the University of Illinois Homecoming on November 7th, 1962, Dean Hine was awarded the Distinguished Dental Alumni Award. The plaque speaks for itself. Once again, Dean



Dean Hine and Distinguished Award Plaque.

Hine, your school and its Alumni Association are proud of its Dean.

Should any of the classes be planning a reunion or get together during the May meeting, have a good time, but get some photographs of the event and send them along to me with some information regarding your activities and we'll be happy to report it.



Officers of the Association of American Women Dentists elected at annual session in Miami, October 29, 1962. Seated, Dr. Betty J. Koss, President. Standing left to right, Dr. Delia Rieser Secretary-Treasurer, Indianapolis, Dr. Virginia B. Englett, Past-President, Atlanta, Ga. and Dr. Dollie R. Woodal, President-elect, Dallas, Texas.

# Class and Fraternity Notes

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## FRESHMAN CLASS

From a wide variety of backgrounds the men of the freshman class assembled this last September with high spirits and the feeling that we were glad to be here. Class officers were elected and everyone began the task of furthering his education.

All education has not, however, come from books as weekends have been spiced by dental fraternity rush stags and dinner dances. Approximately one half of the class has organized with dental fraternities.

For the second semester a class stag party is planned. Later there will be a dance to give the ladies an evening out. In the spring the class hopes to have a picnic to finish the social calendar for the freshman year.

Members of the Freshman class feel honored to have been chosen for a position in this school. The goal of each is that he might some day make a worthy contribution to the dental profession.

*Harold Stanley*

## SOPHOMORE CLASS

With the coming of September, there were 91 eager students who were anxious to start their sophomore year and apply some of the previous year's learning. Five new students in the class were H. Reithe, R. Mayhill from Western Reserve, Dr. E. Lauzardo from Cuba, Dr. J. Girault from Haiti, and Dr. T. Nayan from the Philippine Islands. We welcome them as members of the class of 1965.

Although our schedule was crowded and consisted of, along with daily classes, the attendance at autopsies in the evenings, a class dance was held and enjoyed by all. Later on in the semester, when the General Pathology course terminated, another social activity was a stag party which was enjoyed by the class and faculty.

The Christmas vacation arrived and all of the class looked forward to a well-earned rest, visit, or at least some time off. Upon returning in January, 1963, final exams were upon us and then second semester. This was quite a challenge.

*B. W. Asdell*

## JUNIOR CLASS

The Junior Class started its year with a picnic get-together of faculty, wives, and children at Merritt's Park. Fun was had by all with the exception of our past class president, Joe Fox, who discovered late in November that he had broken his arm in the touch football game one month previous. Our annual Christmas party in conjunction with the Junior and Senior Dental Hygienists for the underprivileged children of the Christamore House proved to be a rewarding experience for all who participated. Our Santa, for the second year, Dr. Ray Maesaka, did have a little trouble finding one-hundred gifts for a planned attendance of eighty. Dr. and Mrs. John F. Johnston, our class sponsor and his wife, were kept happily busy minding the youngsters of our class, who appear to be numerous increasing this year. Our activities are presently at a standstill as we settle down for a new semester.

*John Parsons*

## PSI OMEGA

The fraternity held its annual Christmas Ball at the I.S.T.A. building. A semi-formal dance followed the elaborate smorgasbord, prepared for dinner, which was highlighted by the presence and delightful comments of Dean Hine.

We have completely renovated the house, and acquired some beautiful new furniture which consists of two overstuffed sofas and four matching chairs. Also over the summer months we had our dental engines re-worked and acquired some new ones, bought an air compressor, glazing oven, and re-worked the casting machine. The house has retained the Scholarship Award it has won six out of the last seven years.

The Psi O wives were quite active this year, having a party for the new wives, a Christmas party, and a Toy party. We are thankful to the wives for the twelve card table chairs which they presented to the house this past summer.

The fraternity is quite proud of Dick Fisher's recent election as president of the Student Clinicians A.D.A. (S.C.A.D.A.) in Miami at

the Mid-Winter meeting and as president of the I.U. Student Union Board.

The officers elected in March are:

President—Eugene Eggers

Vice-President—John Parsons

Secretary—John Lund

Treasurer—Doug Badell

Social Chairman—Steve Michael

Rush Chairman—Stan Nevill

*Michael O'Halloran*

## DELTA SIGMA DELTA

Delta Sigma Delta welcomes the new year with much anticipation and expectation. A new Delt house is presently under negotiation. The graduate chapter is contributing their tireless efforts to the cause and thus a corral and a hitchin' post is soon to be had.

The rush program and weekend this past fall was perfect in every way. A stag party opened the festivities on a Friday evening with faculty Delts speaking on various phases of dentistry. Saturday evening found us at the home of Dr. and Mrs. Miles Barton for smorgasboard (a hardy thanks to the Delt Wives Organization as well) and later at the Indianapolis Athletic Club for the traditional "Autumn Leaves" rush dance. Oh such fun from stem to stern!

Delta Sigma Delta has selected a sterling group of plebs—some thirty in number. Congrats to all and welcome to the fold!

The Christmas dance brought much cheer this year, being held at the new Knight's of Columbus hall. Santa, pledge pins, our new pledge class, et al added pomp to the occasion.

After the dust of final examinations for the first semester has settled, we are planning for at least one project or activity per month.

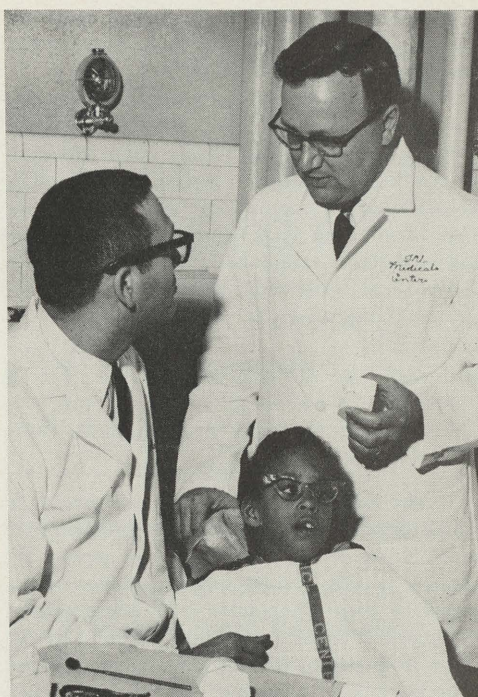
Officers for 1962-63 are as follows: President—James Dice, Vice President—Walter Ching, Secretary—Ernil Wilkinson, Treasurer—Maurice Lord, Historian—Joseph Fox, Senior Page—Jon Walker, Junior Page—Frank Buchner, and Sergeant-at-Arms—David Marks.

*Joseph Fox, Historian*

## PEDODONTICS

*(Continued from page 8)*

creased demands for dentistry for children will result in greater emphasis in pedodontics in dental education. The dental curriculum will necessarily have to be altered because with the increase in the volume



Dr. Robert Buckley, right, discusses the dental treatment for a cerebral palsied patient with Dr. Charles Rosenbaum, left.

of work to be done for children will come a corresponding increase and recognition of special dental problems. These problems will be solved through an increased emphasis of pedodontics at the undergraduate level and increased participation in the graduate, postgraduate, internship and residency areas.

## FACULTY PUBLICATIONS

*(Continued from page 17)*

1. Under the conditions of this study, the formocresol-pulpotomy technique was superior to the calcium hydroxide pulpotomy technique, for at least the first 18 months following the treatment of normal primary dental pulps.

2. Formocresol did not stimulate a healing response by the stump of the amputated primary dental pulp, but rather tended to "fix" nearly the entire remainder of the pulp.

3. Calcium hydroxide was associated with the formation of a dentin bridge and the complete healing of the stump of the amputated primary dental pulp in half of the cases studied microscopically.

4. When the calcium hydroxide treatment failed, inflammation of the pulp and internal resorption were found.

5. The formocresol-pulpotomy technique resulted in a surface layer of well preserved, compressed acidophilic tissue, which appeared to be fibrous. There was no evidence of calcification or organization for calcific bridging. Below the dark staining layer, a large pale-staining, eosinophilic area of slightly degenerated cells was seen which extended nearly to the apex.

Ramadan, A. E. and Mitchell, D. F.: *A roentgenographic study of experimental bone destruction. O. Surg., O. Med., & O. Path., 15:8 pp. 834-943, 1962.*

Under the conditions of this experiment, in which dried bones and special techniques were used, it was found that (1) minor destructive changes in the alveolar crest could not be detected by roentgenograms; (2) destruction of the buccal alveolar crest could not be distinguished from destruction of the lingual alveolar crest by such a technique; (3) funnel-shaped destruction of the alveolar crest, leaving the outer and inner alveolar plates intact, did not register on the film; (4) evidently a reliable method for obtaining a good roentgenogram of the alveolar crest is to align the long axis of the tooth parallel to the film with the central beam directed at right angles to the film, as occurs in the use of the bitewing film or in other paralleling techniques; (5) removal of the entire buccal or lingual plate did not affect the architectural pattern of bone in the roentgenogram; (6) bone destruction caused by a periodontal abscess or any localized periodontal disease in many cases would not show if the defect was superimposed by the roots, especially if the cortical plates of bone were thin; (7) removal of the central trabeculae in the mandible and the maxillae, leaving the junctional trabeculae intact, did not affect the trabecular pattern; (8) removal of the junctional trabeculae of the maxillae, leaving the central trabeculae intact, did not alter the trabecular pattern; and (9) removal of both types of trabeculae affected the architectural pattern.

Mitchell, D. F.: *Dental discoloration and tetracyclines. J. Indpls. Dist. D. Soc. 18:21, 1962.*

A case report concerned with a seven year old girl with bluish-brown discoloration of

newly erupted permanent teeth contrasting with white, normal deciduous teeth. For several years she had received tetracycline antibiotics for a persistent ear infection. The drug was deposited in these developing teeth which fluoresce yellow under ultraviolet light.

## CONFERENCE

(Continued from page 20)

interested in Public Health and Education. Instead of accepting a gratuity for his appearance on our program, he suggested that we put this money into our scholarship fund and I'm sure that the Board will be glad to do so at their next meeting.

The weather cleared for the afternoon so we had ideal football weather. Our team played an inspired game against Iowa and although we didn't win we still were very proud of the continued improvement of our team. Don't miss this conference next fall. Each year there is an increase in attendance and enthusiasm.

President Peden has plans started for a big year. His new officers are Drs. Emory Bryan, President-elect, H. Wm. Gilmore, Vice-President and Malcolm Boone, Secretary-Treasurer. The new board members are Drs. D. R. Lindborg, R. D. Vinzant and R. E. Llewellyn. Our total attendance was 310, Banquet 220, Press Box luncheon 135 and who knows how many at the brunch! Dr. Boone's drive for affiliate members has resulted in over 50 new memberships and we are pleased to welcome these dentists into our organization.

## DENTAL HYGIENE

(Continued from page 23)

tional Board is recognized by thirty states. It took the National Boards of Medicine and Dentistry over 20 years to achieve the level of recognition afforded the dental hygiene program in its first

year. We are very pleased with the performance of the students and graduates of Indiana on this first examination. The average performance of the students on all four parts placed the school well in the top third.

#### ALUMNI NOTES

*(Continued from page 42)*

*have grown to appreciate and love, and we wish you could know them too.*

*"Living in the land of the midnight sun and midday moon proves to be exciting, interesting and exhilarating. We are on the edge of a small (5,000,000 square mile) ocean, two-thirds covered with ice at all times, which, in itself, furnishes many unusual experiences for us. Also, we have numerous animals to add to the variety—walrus, seals, whales, cogruk, white owls, lemmings, caribou, foxes, Arctic (white in winter) foxes, polar bears, and many others (including fish).*

*"Life in the Arctic, among the Eskimos, is indeed a different way of life than we have been accustomed to living. However, we keep cozy and warm and have clothing, food, and shelter, and love to sustain us through come what may. The happiest event of the year occurred August 25, when Barbara arrived. We are grateful that we have her to love and cherish and raise. She is a great joy to us and we anticipate the years ahead with her.*

*"We have had some unhappy events too—illness, accidents, and other unpleasant happenings among loved ones. We pray that the Lord will guide and be near to each of you involved.*

*"Among all of these events we are happy to see Christmas arrive. We are thankful for Christmas, the commemoration of Christ's coming to earth to ultimately give His life for us and give us*

*(Continued on next page)*

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*abundant life. This completes our joy—indeed, without it none of the previous mentioned events and securities could give us peace and happiness.*

*"May you have that joy and peace in your hearts this Christmas season wherever you may be."*

We also received Christmas greetings from Dr. and Mrs. Clarence Wentz, 207 Lakeshore Drive, San Antonio 18, Texas.

Since the last issue of the Alumni Bulletin, we have been honored to have been visited by the following who signed our Guest Register:

Class of 1910—Dr. I. Lester Furnas, 928 Silverado Street, LaJolla, California.

Class of 1935—Dr. R. Bloom, 2011 Yardley Rd., Yardley, Pennsylvania.

Class of 1940—Dr. Oliver McClintick, 101 Anderson Bank Bldg., Anderson, Ind.

Class of 1945—Dr. Robert Ricketts, 875 Via De La Paz, Pacific Palisades, California.

Class of 1945—Dr. R. Winston Warren, Ben Hur Bldg., Crawfordsville, Indiana.

Class of 1946—Dr. H. E. Matlack, Isabella Street, Salisbury, Maryland.

Class of 1948—Lt. Col. and Mrs. Robert H. Marlette, Fitzsimmons General Hospital, Denver, Colorado.

Class of 1949—Dr. Leo Paskash, 207 West 49th, Gary, Indiana.

Class of 1950—Dr. A. E. Felton, 22 North Franklin, Valparaiso, Indiana.

Class of 1951—Dr. Robert B. Holstein, 937 South 25th, Terre Haute, Indiana.

Class of 1959—Dr. H. E. Lyon, 55 North Franklin, Bloomfield, Indiana.

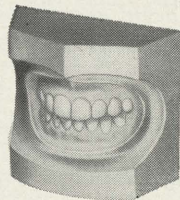
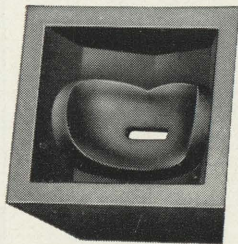
Class of 1959—Dr. Hala Zawawi Henderson, P. O. Box 849, Kuwait, Arabia.

Class of 1959—Dr. Kent E. Wilson, Elkhart, Indiana.

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