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Pussy Willow, 4 to 6 ft.69 ea.									
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Russian Olive, 2 to 3 ft.69 ea.									
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Jap. Snowball, 1 to 2 ft.49 ea.									
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White Snowberry, 1 to 2 ft.29 ea.									
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Azalea—White, Purple, Red or Pink, 1/2 to 1 ft.59 ea.									
Rose Acacia, 1 to 2 ft.39 ea.									
*Red Chokeberry, 1 to 2 ft.19 ea.									
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Arrowwood Viburnum, 1/2 to 1 ft.39 ea.									
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Witchhazel, 1 to 2 ft.29 ea.									
American Elder, 1 to 2 ft.29 ea.									
*Opopson Haw, 1 to 2 ft.69 ea.									
False Indigo—Purple, 1 to 2 ft.19 ea.									
FLOWERING TREES—1 or 2 Years Old											
Magnolia Grandiflora, 1/2 to 1 ft.	\$.49 ea.									
Magnolia Grandiflora, 2 to 3 ft.19 ea.									
Magnolia Niagara, 1 to 2 ft.129 ea.									
Magnolia Rustica Rubra, 1 to 2 ft.129 ea.									
Mimosa—Pink, 2 ft.29 ea.									
Mimosa—Pink, 3 to 4 ft.49 ea.									
Mimosa—Pink, 4 to 6 ft.89 ea.									
American Red Bud, 2 to 3 ft.29 ea.									
American Red Bud, 4 to 6 ft.29 ea.									
White Flowering Dogwood, 2-3 ft.29 ea.									
White Flowering Dogwood, 4-6 ft.129 ea.									
Pink Flowering Dogwood, 1 ft.98 ea.									
Pink Flowering Dogwood, 2 ft.169 ea.									
Pink Flowering Dogwood, 3 to 5 ft.98 ea.									
Golden Rain Tree, 1 to 2 ft.79 ea.									
Golden Rain Tree, 3 to 4 ft.249 ea.									
Golden Chain Tree, 1 to 2 ft.79 ea.									
Smoke Tree, 1 to 2 ft.149 ea.									
Purple Leaf Plum, 1 to 2 ft.49 ea.									
Purple Leaf Plum, 2 1/2 to 4 ft.79 ea.									
Purple Leaf Plum, 4 to 6 ft.169 ea.									
Flowering Peach—Red or Pink, 1 to 2 ft.89 ea.									
Flowering Peach—Red or Pink, 2 1/2 to 4 ft.89 ea.									
DBL. Pink Flowering Cherry, 3-5 ft.39 ea.									
Flowering Crab—Red or Pink, 2 to 3 ft.98 ea.									
Chinese Red Bud, 1 to 2 ft.49 ea.									
Tree of Heaven, 3 to 5 ft.69 ea.									
Dwarf Red Buckeye, 1/2 to 1 ft.69 ea.									
Magnolia Soulangiana, 1 to 2 ft.129 ea.									
Weeping Peach—Red or Pink, 1 ft.69 ea.									
Weeping Peach, Red or Pink, 2-3 ft.129 ea.									
White Flowering Peach, 2 to 3 ft.89 ea.									
White Fringe, 2 to 3 ft.98 ea.									
Japanese Flow. Cherry, 3 to 5 ft.349 ea.									
European Mountain Ash, 3 to 4 ft.249 ea.									
Paul's Scarlet Hawthorn										
Red Blooms, 3 to 5 ft.369 ea.									
*Big Leaf Cucumber, 3 to 5 ft.169 ea.									
Paw Paw, 3 to 5 ft.89 ea.									
Sourwood, 2 to 3 ft.69 ea.									
Yellow Buckeye, 1 to 2 ft.59 ea.									
Downy Hawthorn, 1/2 to 1 ft.59 ea.									
Dwarf White Buckeye, 1/2 to 1 ft.69 ea.									
Red Flowering Dogwood, 1 ft.129 ea.									
Red Flowering Dogwood, 2 ft.249 ea.									
Red Flowering Dogwood, 3 to 4 ft.398 ea.									
5-N-1 Flowering Crab, 3 ft.298 ea.									
Red Leaf Peach, 2 to 3 ft.89 ea.									
SHADE TREES—1 or 2 Years Old											
Silver Maple, 3 to 4 ft.	\$.39 ea.									
Silver Maple, 4 to 6 ft.79 ea.									
Chinese Elm, 2 to 3 ft.19 ea.; 3-4 ft. .39 ea.									
Chinese Elm, 4 to 6 ft.69 ea.									
Green Weeping Willow, 2 to 3 ft.39 ea.									
Green Weeping Willow, 4 to 6 ft.69 ea.									
Catalpa Tree, 2 to 3 ft.79 ea.									
Ginkgo Tree, 1 to 2 ft.29 ea.									
Ginkgo Tree, 3 to 5 ft.298 ea.									
Pin Oak or Red Oak, 2 ft.79 ea.									
Pin Oak or Red Oak, 3 to 5 ft.129 ea.									
Willow Oak or Scarlet Oak, 2 ft.79 ea.									
Willow Oak or Scarlet Oak, 3-5 ft.249 ea.									
Lombardy Poplar, 1 to 2 ft.69 ea.									
Lombardy Poplar, 2 to 3 ft.10 ea.									
Lombardy Poplar, 3 to 4 ft.15 ea.									
Lombardy Poplar, 4 to 6 ft.29 ea.									
Faassen Red Leaf Maple, 3-5 ft.398 ea.									
Sycamore, 3 to 4 ft.49 ea.									
Sycamore, 4 to 6 ft.89 ea.									
Sugar Maple, 2 ft.29 ea.									
Sugar Maple, 3 to 5 ft.59 ea.									
Sweet Gum, 2 to 3 ft.49 ea.									
Sweet Gum, 4 to 6 ft.79 ea.									
White Birch, 2 to 3 ft.49 ea.									
White Birch, 4 to 6 ft.198 ea.									
Tulip Tree, 3 to 4 ft.49 ea.									
Crimson King Maple (Pat. No. 735), 3 to 5 ft.398 ea.									
Sunburst Locust (Pat. No. 1313), 3 to 5 ft.495 ea.									
Cut Leaf Weeping Birch, 3 to 5 ft.398 ea.									
Silver Variegated Maple, 3 to 5 ft.398 ea.									
Schwedler Maple, 3 to 5 ft.398 ea.									
Yellow Wood, 2 to 3 ft.98 ea.									
Canoe Birch, 3 to 4 ft.398 ea.									
White Ash, 3 to 4 ft.29 ea.									
Green Ash, 3 to 4 ft.69 ea.									
Persimmon, 1 to 2 ft.198 ea.									
Dawson Redwood, 1 to 2 ft.69 ea.									
Honey Locust, 3 to 4 ft.69 ea.									
Morain Locust, 4 to 5 ft.398 ea.									
Kentucky Coffee Tree, 1/2 to 1 ft.										

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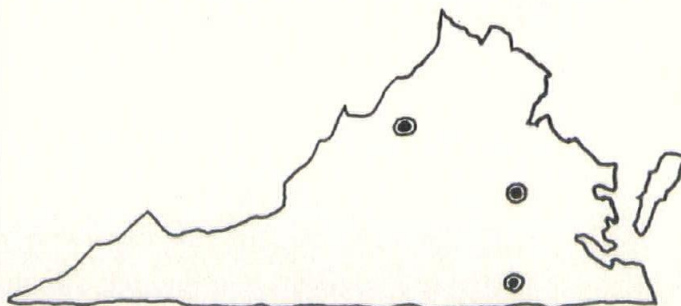
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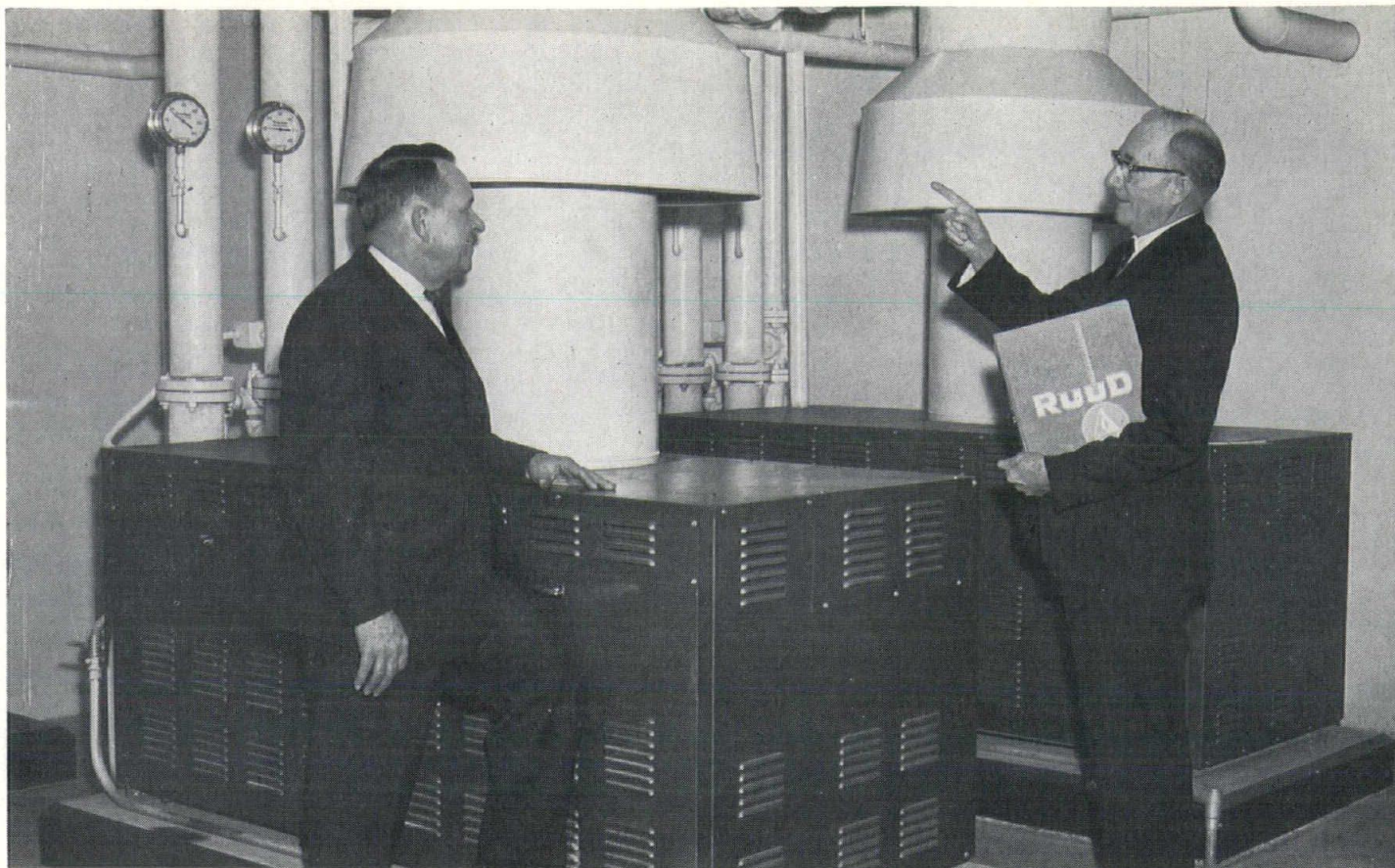


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Clarence Maxey, left, Manager of the America House discusses the Ruud Installation, 2HM 2400 copper multi-tube water heating boilers, with P. G. King, Sales Manager of the Petersburg & Hopewell Gas Company.

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ble for the contents hereof.

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"None Is So Blind . . ."

THERE are certain myths so deeply embedded in the American consciousness that we might as well give up and accept the fact that they will never die. Among those myths is that the *Mayflower* brought the first English settlers to North America, that the American Revolution was started by the Boston Patriots (chiefly in the "Boston Tea Party"), and that the United States waged a civil war against the Confederate states for the purpose of "freeing the slaves," while the citizens of the Southern states fought to preserve chattel slavery. Although nothing can be done about such mythology where no effort is being made to re-educate the young, it would seem that in Virginia we are under something of an obligation to use our educational institutions for the dissemination of the realities about our own history. Now that Negroes are demanding courses in "Afro-American" culture, should we not make obligatory courses in the Virginia civilization?

For some while now, most Virginians have made no public response to the rising protests over the playing of *Dixie* and the display of imitation battle-flags of the Confederate Armies. Although we resented the reasons behind the protests—that the flag and *Dixie* were symbols of slavery and regionalism and a past we should be ashamed of—I suppose most of us ourselves inwardly winced a little at the excessive display of the imitation battle-flags in a few states of the Lower South, where the flags did seem to invoke the cause of another day in validation of a defiant sub-sectionalism in the present. This seemed to cheapen the dignity of the briefly lived nation whose men died under that flag. But where the flag flew from a mast, as at some of our colleges and at the United Daughters of the Confederacy building on the site of the Confederate Old Soldiers' Home, it always seemed a symbol of one of the finest aspects of our heritage.

But recently at one of our state colleges, VPI, there were protests at the flying of the Confederate battle-flag from one of the four corners of the coliseum, and the reasons behind these protests raised the question about what kind of history is being taught at VPI and in our state educational institutions. One VPI student, Barry M. Unger of New Jersey, wrote in a letter published in the *Richmond Times-Dispatch* the single attack which, I believe, contained all the clichés of the anti-Southern mythology. He could, he wrote, "state objectively, yet analytically, that the Rebel flag is at once an anachronism and a blatant catalyst for bigotry at our university. Its rightful position as a symbol is alongside that of the Swastika and related scars and shameful relics which mar the history of the human race.

"To attempt to disguise and shadow the overt meaning through references to a spirited, heroic conflict is hypocrisy. We, as Americans, should laud the defeat of the Confederacy, not attempt to preserve and glorify the connotations inherent in its memory.

"How can anyone dispute the legitimate grievances of the black student in reference to a flag which represents the war fought to maintain his position as a sub-human? Let's not permit cruel and obsolete sentimentality to sabotage the forces of reason."

(Continued on page 47)

Cover Note: This month's cover is an apt illustration of the Virginia Department of Agriculture and Commerce Story. It depicts people—people from all walks of life—the main concern of VDAC. This is their goal—their "new concept—citizen service programs," for all consumers.



Commissioner Rowe and Regulatory Services Director Southall shown with members of the Consumer Advisory Committee, a group that makes valuable contributions in the areas of consumer education and consumer and trade services. The department works closely with this group and several other advisory committees representing industries served by VDAC's regulatory programs.

A NEW CONCEPT— CITIZEN SERVICE PROGRAMS

AGRICULTURE is a growing, dynamic industry. Its scope goes far beyond the actual production of food and fiber, as the initial value of raw farm commodities is multiplied as the result of value added through farm supplies purchased and processing and distribution. The overall industry of agriculture—or agribusiness—consists of farm producers, their suppliers, and the marketers and processors of farm products. Over the years, Virginia's production, or farming segment, has provided a firm base for the continued growth of agribusiness, which now contributes several billion dollars annually to the state's economy, and is basic to Virginia's future growth and progress.

Although a primary objective of the Virginia Department of Agriculture and Commerce has always been—and will continue to be—service to Virginia farmers who produce essential food and fiber, the department provides a broad range of diversified services that aid the state's producers, marketers, and consumers in many ways. The majority of Virginians are not aware that VDAC administers numerous laws delegated

by MAURICE B. ROWE, Commissioner
Virginia Department of Agriculture
and Commerce

by the General Assembly for the protection of the state's citizens. These laws are designed to insure truth in labeling, standards of wholesomeness, food quality, analytical testing, and accuracy in weights and measures as products move through Virginia's channels of trade.

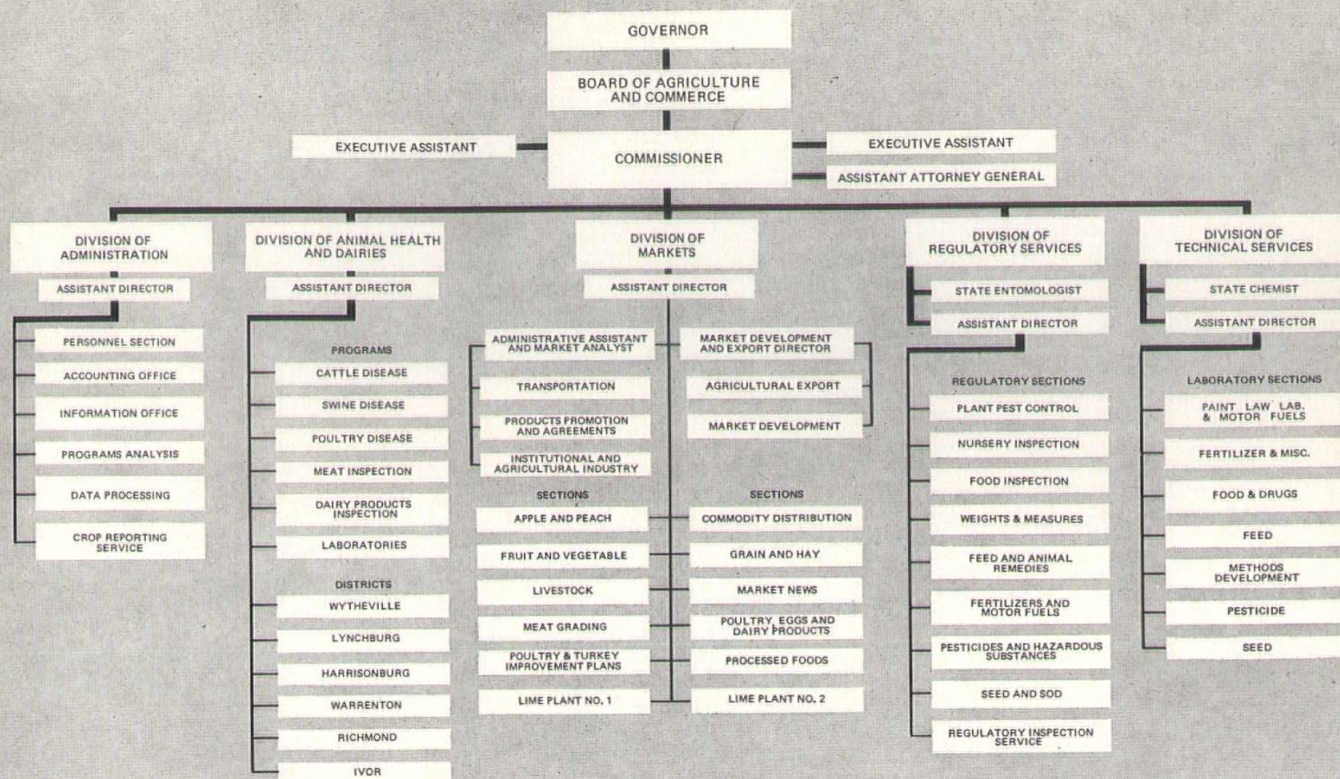
In recent years, the demand for both trade and consumer services has increased sharply along with the growth of Virginia's economy and population. At this point, it is important for the reader to understand the meaning of the term "consumer." I believe that the average person usually thinks of consumers as busy housewives shopping for family needs in supermarkets, or other retail stores. The truth is, housewives constitute only a segment—though an important one—of the overall consumer market.

Most people probably have not thought that the term "consumer" embraces *everyone who utilizes economic goods*—but Webster's will back this definition up. Thus, in the broader sense, we are all consumers—producers, marketers, and processors as well as purchasers of goods. And farmers though best known as producers, constitute one of the nation's largest consumer groups, as they represent a major market in addition to being consumers and purchasers of most of the goods their city neighbors buy.

The Virginia Department of Agriculture and Commerce provides more direct consumer services for Virginia's citizens than any other single agency of state government. Because of the greatly diversified nature of these services which are briefly outlined in the ensuing articles, a special terminology that applies to all people is needed. We believe that the varied functions of the department can best be defined as "*citizen service programs*."

During the past fiscal year, 36 per cent of the department's total operating expenses came under the category of

Organizational Structure



consumer services. Another 36 percent was expended for *marketing services*; 22 percent went for *producer services*; and the remaining 6 percent was for *administration*. Thus over one out of every three dollars spent by the department goes for services intended to benefit all of the state's consumers, or citizens. The principal categories include food inspection, standards, regulatory services, and marketing services. And we have an entire division—the Division of Technical Services—that provides the needed technical, or laboratory support, for all of these functions.

In spite of the time and effort required to develop and expand these many services to their present status, the consuming public is not fully aware of their scope. Few citizens really know what these services are, who performs them, how they may be obtained, or where to register a complaint. However, the department is exerting a continual public relations effort to inform everyone through its information programs—particularly since the word “Commerce” was officially added to the department's title (following approval of the General Assembly) by public ref-

erendum during the 1966 General Elections.

Some critics may feel that, in an agency known as the Department of Agriculture and Commerce, it is difficult for us to discharge our full obligations to agriculture when, at the same time, we also have responsibilities to consumer-oriented services. My strong contention is that this is the best possible arrangement, and one which has been exemplified by our long record of service to the entire industry of agriculture. Our dealings with this broad industry of supplying farmers with inputs, working with them to improve their output, and helping them with the marketing and grading of their production, gives us the perspective needed to provide a sound balance for the continued growth of the state's economy.

In the final analysis, VDAC services embrace the entire range of producer, marketing, and consumer work. We provide continual surveillance on quality control all the way from the raw commodities farmers produce to the finished products consumers buy. The experience we have gained in this broad area of public service has enabled our

staff to consider decisions objectively as we mold or blend the thinking of various groups into our programs. By the same token, should any area ever get out of balance, we are usually able to make the adjustments needed.

We are making plans to establish a position for someone within the department to serve as coordinator of VDAC's consumer, or citizen services. This individual will act as a focal point of contact for the entire spectrum of the consuming public with regard to either the availability of our consumer services or the handling of complaints in areas where we have specific responsibility. We are thinking of structuring the department in this direction because the multiplicity of services we provide need to be correlated for best results.

I hope that this series of articles will serve to clarify the numerous services and functions performed by our staff which affect all Virginians. Although many of our programs are regulatory in nature, and hence subject to legal enforcement, we do not want the public to think of them with this threat in mind. On the contrary, we feel that our programs must be developed through edu-

cation, cooperation, and understanding by all of the publics we serve if full acceptance is to be gained. This procedure necessarily imposes somewhat of a burden on our workers, but it also provides them with a real challenge. By this, I mean that once the groundwork is properly laid the rest is easy, as acceptance becomes almost automatic when the reasons are clearly explained to the public beforehand and the regulations subsequently established are

usually derived from their own suggestions.

We fully appreciate the need for an informed public, as many of our consumer-oriented programs have been developed and improved as a direct result of our work with advisory committees. These groups, which are comprised of both consumers and members of the various regulated industries we serve, have proved to be highly valuable aids in making our programs more responsive to public needs.

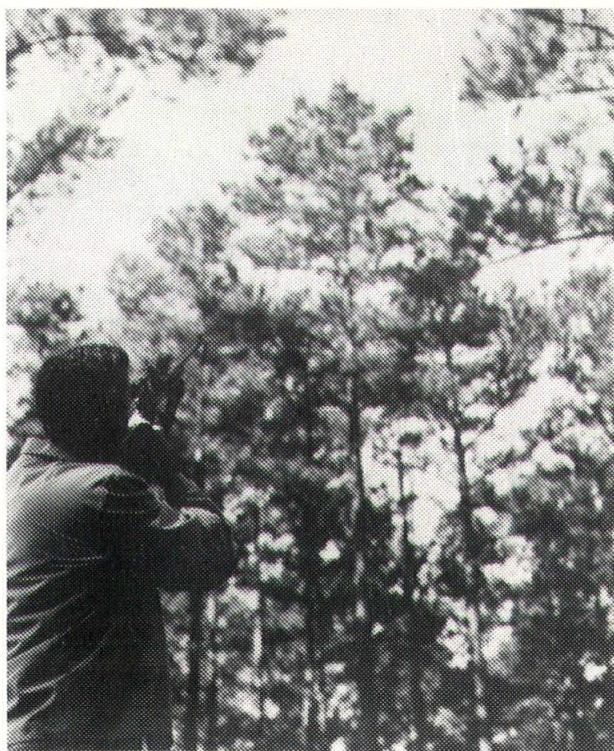
The department always welcomes any questions or suggestions received from the citizens of the state regarding our citizen service programs. Although we naturally accept most of the responsibility for their development and improvement, Virginia's citizens must also do their part by taking the time to learn what we have to offer in order to profit from them. Full utilization of our services by an informed public is one of our foremost aims.

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Franklin, Virginia

VDAC Food Inspection—A Quality Control Service

by J. E. NORMENT, Information Officer
Virginia Department of Agriculture
and Commerce

IN VIRGINIA, and across the nation, our consuming public enjoys an abundance of high quality food which is available to all at relatively low cost. Although the average citizen is spending nearly two-thirds more per person for food than was the case twenty years ago, his take-home pay (after taxes) has more than doubled. This accounts for the dramatic decrease that has taken place in the percentage of our disposable income spent for food during this period—a drop from about 24 percent in 1949 to less than 18 percent at present.

Although the Virginia Department of Agriculture and Commerce has many services that aid farmers in the production of the state's food and fiber, agricultural production is only half of the farm and food story. The marketing of farm products is now equally important to both producers and consumers. Consumer demand for food products of all types is on the increase as Virginia's economy and population continue to grow, and the state becomes more urbanized. In addition, today's affluent consumers expect—and in fact demand—that their food be safe and of reliable quality.

Protecting our food is one of the primary objectives and most important services of both state and federal government. Their combined efforts have made the U. S. food supply unquestionably the safest and best in the world. This has been achieved primarily through enforcement of the many state and federal regulations that prohibit the sale or shipment of unwholesome or unsafe food. These laws, many of which are administered by the department (as well as by the federal government) in our state, also require informative labeling, and protect consumers from false or misleading advertising and packaging.

Every food item sold or offered for sale in Virginia is covered by the state's pure food laws, and the numbers and types of such items continue to increase each year. VDAC's food section is responsible for the enforcement of Virginia food laws which regulate the manufacture, distribution, and sale of all human foods in the state excluding milk and milk products, shell fish processing plants, and restaurants—which

are under the jurisdiction of other agencies.

Virginia's pure food laws are for the most part identical to those administered under the federal Food and Drug and Cosmetic Act. The main difference is that Virginia inspectors are examining foods manufactured or sold within the state, whereas federal inspectors check commodities destined for interstate (or foreign) commerce. Among the state food laws administered by VDAC are those designed to insure wholesomeness in the marketing of meat, poultry, fruits, and vegetables—products which are a major source of income for farmers, and for which consumers spend a high proportion of their food budget.

Trained state inspectors, located in strategic areas of the state, check the sanitary handling of food supplies from production—to the processing plant—to the shopping basket; insuring against spoilage, contamination, and adulteration. Canned, frozen, dehydrated fruits and vegetables and bakery products are typical examples of food checked for required standards of purity and wholesomeness. Inspectors also make routine checks at the processing, wholesale, and retail levels on other food sold or offered for sale in Virginia, and examine foods subject to contamination as a result of fires, floods, and other disasters.

Samples of the various products are taken for examination by food bacteriologists for pathogenic and other types of

In February 1968 Virginia became one of the first states in the nation to sign a cooperative meat inspection agreement with the federal government. Commissioner Rowe is shown signing the formal agreement with R. E. Leonard, Administrator of USDA's Consumer and Marketing Service. Standing, from left, are Dr. H. M. Steinmetz, USDA, and Dr. W. L. Bendix, VDAC.



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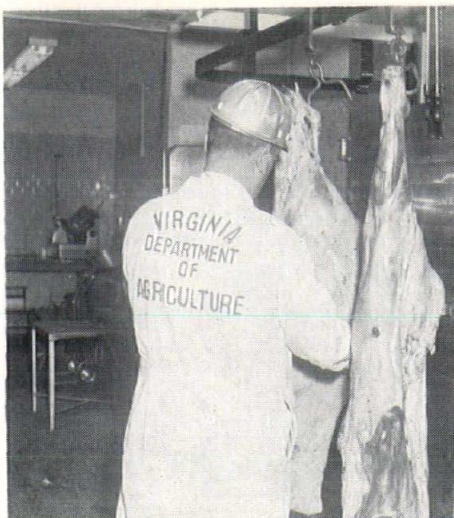
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VDAC meat inspector checking beef carcasses at a Virginia plant. The department conducts federal meat inspection under the supervision of USDA's Consumer and Marketing Service.

bacteria to determine both wholesomeness and fitness for human consumption. Also, ground meat products, such as hamburger and pork sausage, are examined by food chemists for the presence of preservatives, coloring matter, and prohibited fillers. When inspectors find situations where establishments are clearly not complying with the provisions of the Virginia Food Law, they first recommend corrective measures, resorting to legal action only when voluntary compliance is not achieved.

In recent years, cooperative efforts between state and federal inspection systems have brought about a more complete check on the food manufactured in the state. As a result, the consumer is not only assured of food quality during packaging, but the manufacturer is aided in his efforts to offer retailers and buyers products that are labeled properly, free from adulteration, and prepared in sanitary surroundings.

The VDAC food section entered into a memorandum of agreement early last year with the Baltimore FDA district whereby department inspectors will perform total inspection of all soft drink bottling plants in the state. The agreement provides that federal inspectors will make joint inspections of these plants only when requested either by Virginia or, in certain instances, by federal authorities. The original agreement was subsequently amended to extend similar VDAC coverage to canneries, wheat and corn mills, food storage warehouses, and candy plants.

In February, 1968 Virginia became one of the first states in the nation to sign a cooperative meat inspection agreement with the federal government. This joint program authorized VDAC personnel from the Division of Animal Health and Dairies to conduct federal meat inspection at individually approved meat packing and processing plants in accordance with the federal meat inspection act. This agreement, which comes under the Talmadge-Aiken Act of 1962, allows participating Virginia plants to offer their products in interstate and world trade, with federal inspection in effect rendered by state employees under the supervision of USDA's Consumer and Marketing Service. At the present time, VDAC has had nearly one-third of its inspectors trained in various regional C&MS meat inspection centers—one of the federal requirements applicable—and twelve Virginia plants are now being served by the department.

A similar program coming under the Wholesome Meat Act of 1967 also provides for a state-federal cooperative agreement in states having a mandatory meat inspection law operative—with inspection services comparable to federal practices—that can otherwise qualify with the provisions of the act. In No



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vember, 1968 the department also signed under this plan with C&MS officials, as the state's mandatory meat inspection law, which was passed by the 1966 General Assembly and became effective July 1, 1968, placed VDAC in a position to qualify. It is anticipated that Virginia's two meat inspection plans will ultimately be merged into a single state-federal cooperative service, with inspection provided by the department under federal supervision.

Virginia's supplies of meat and poultry are also checked for sanitary handling by VDAC regulatory food inspectors during processing in the state's numerous retail outlets. In addition, the department's food inspection section has a very active program covering processed (and other type) meats that are sold both fresh and frozen at the retail level.

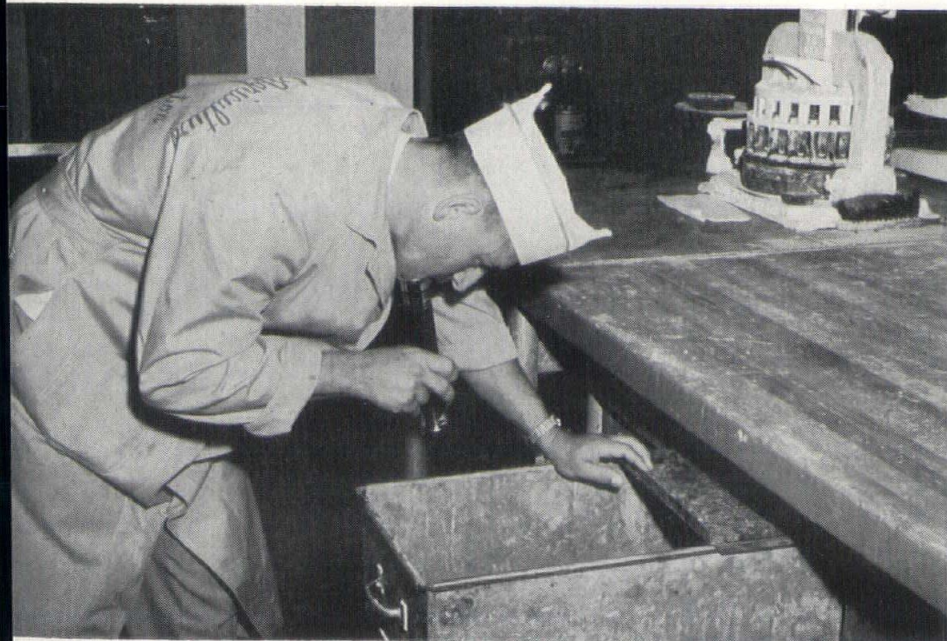
In addition to providing meat inspection service, VDAC's Division of Animal Health and Dairies enforces a number of dairy laws for the protection of the consuming public. Its dairy section administers the Virginia Milk and Cream Law, which controls the quality of milk from the dairy cow through production facilities and transporting to the processing plant. This group also performs inspection, licensing, and testing operations under the Virginia Ice Cream and Frozen Dairy Products Law, and licenses milk-buying plants, weighers, and samplers and testers of milk (for payment purposes) under the Babcock Test Law and Creamery Records

Law. A variety of other dairy products are controlled by this section under the state's Manufactured Milk Regulations, the Importation Law, Filled Milk Law, Egg Nog Regulations, and Malted Milk Regulations.

Two other laws, which are under the jurisdiction of the department's Division of Markets, help establish quality control standards on two important consumer food products—eggs and apples. The Virginia Egg Law is administered by the poultry, egg, and dairy products section to assure that eggs are marked according to official grades and weight classes, or are marked ungraded. The apple and peach section enforces the Apple Standardization Law, which requires that the correct variety, grade, size, and other specified data be shown on all closed packages.

"All segments of the state's food industry served by the department have been most receptive to the diversified programs we administer," says Commissioner Rowe, "as they realize that consumers are demanding quality products for which they are willing to pay. The department's high quality control standards provide the necessary public assurance, which makes our services sales aids as well as consumer protection measures. In many instances, the Virginia food industry has demonstrated its support of our programs by taking the leadership and actively promoting regulations that have been proposed, such as the mandatory meat inspection law."

Regulatory food inspector examining ingredient storage bin in bakery. VDAC's food section enforces Virginia's pure food laws covering practically every food item sold or offered for sale in the state.



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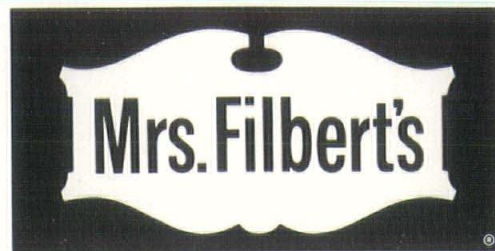
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Mrs. Virginia Duesberry, VDAC's consumer market reporter, checks the quality and price of meat in a Richmond store.

Reaching The Consumer

BY ELEANOR R. ANDERS
Information Officer, VDAC

ONE OF THE BEST ways of establishing communication with the public is through direct contact. VDAC's division of markets includes two positions which were created to serve as liaisons between the department and the citizens of Virginia.

In the position of consumer market reporter, Mrs. Virginia B. Duesberry is responsible for conducting a statewide consumer information program on agricultural food products. Although her title is an uncomplicated one, her activities are many and diversified.

Each week she contacts a number of retail food outlets in order to collect prices and information regarding the quality, quantity and origin of perishable agricultural commodities.

Information on supplies, marketing conditions and quality is researched through personal contact with commodity organizations. Trade papers, magazines, USDA releases and other department personnel are also excellent sources of information. Once the material has been collected and compiled, it is evaluated to determine the current news value before it is released.

Mrs. Duesberry writes a weekly food marketing newsletter, plans and writes a weekly food story for key county newspapers, and prepares and presents radio broadcasts on a weekly basis. In addition, she writes a regular article for a monthly trade magazine and provides food stories to three large metropolitan newspapers.

Aside from her regular duties, Mrs. Duesberry is constantly involved in other activities which are geared to keeping the consumer informed. She often conducts surveys on various agricultural commodities and supervises the preparation of price data for private industries, commodity organizations and other department personnel.

Personal visits to radio and television stations, newspapers, home economists, food editors and consumer groups are also necessary to insure that the public is being kept aware of the department's consumer programs.

Mrs. Glenda Key fills the recently created position of market consumer representative. It is her responsibility to plan, develop and implement consumer oriented programs to increase consumer use and understanding of Virginia's agricultural products. Hers is no "eight to five" job—she is on the go constantly and her duties carry her to every corner of the Old Dominion.

In her promotion of Virginia products, Mrs. Key makes frequent appearances over radio and television stations throughout the state, providing public service programs in her field.

She works with the various agricultural commissions and commodity groups in an advisory capacity, and she gives assistance to these groups in implementing their own consumer-oriented programs.

In preparing materials for news media and in developing promotional materials and pamphlets for general distribution, she continually encourages consumption of Virginia agricultural products.

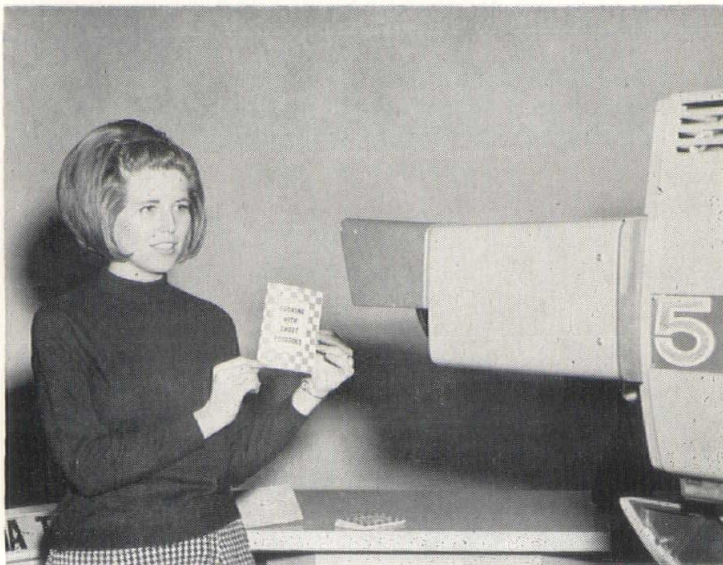
Much of Mrs. Key's work requires a ready knowledge of processing procedures, which is necessary to enable her to advise processors on retail and consumer acceptance of agricultural products, packaging and new methods.

She must keep abreast of national consumer agricultural information and interpret this information for individual consumer use. Quality, grading, packaging, inspection and new processing techniques are only a few examples of what she is expected to explain to Virginia's citizens.

In addition, Mrs. Key maintains communication with the Virginia Nutrition Council, the State Dietetic Association, the Association of Home Economic Teachers, extension agents, home economists, the Future Homemakers of America and state and federal agencies.

Although her position is a relatively new one, its value in promoting Virginia's agricultural products and in creating a close relationship with consumers throughout the State has already been recognized as a valuable addition to the department's services.

Market consumer representative Mrs. Glenda Key presents a booklet of sweet potato recipes over a Virginia television station. This is only one phase in her work of promoting Virginia agricultural products.



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REGULATORY SERVICES

"Quality, Wholesomeness, Truthfulness in Packaging & Labeling"

By ROY SEWARD
Information Technician, VDAC

THE VIRGINIA DEPARTMENT of Agriculture and Commerce is responsible for several laws dealing with commodity regulatory services. The administrative tasks for ten of these laws are divided among four program sections: feed and animal remedies; fertilizers; lime and motor fuels; pesticides and hazardous substances; and seed and sod. The program of sampling and inspection are conducted by one section—the regulatory inspection service. This section receives a detailed work plan from each of the four section heads for each six-month work period. The regulatory inspection supervisor then coordinates all four plans into inspection schedules for each of his fifteen inspectors. This system allows a thorough and efficient coverage of the state and maximum use of manpower.

Feed And Animal Remedies

In carrying out its function under the commercial feed, animal remedies, and canned animal food laws, the feed and animal remedies section has begun its second year in two major programs—medicated feed mill inspections, and salmonella monitoring. To safeguard the health of the consumer's livestock and pets, every manufacturer or distributor of feeds, animal remedies and canned animal food must register with VDAC each product offered for sale.

Through sampling and inspecting, VDAC makes sure that canned animal food, commercial feed and animal remedies are not adulterated or misbranded. Any guarantees made on the label are checked for truthfulness. In the case of feeds containing drugs or other additives, the feed and animal remedies section is charged with preventing insufficient labeling instructions and excessive deviations from the required content.

With the many uses of pesticides and the possible contamination of foodstuffs from improper use, pesticide residue monitoring is one of the many necessary programs that this section conducts. Activity in this program is continuing so this section can

assure that feeding materials do not contain residues which may ultimately result in an adulterated human food product.

Fertilizer, Lime and Motor Fuels

The responsibility of approving all fertilizers, liming materials and motor fuels sold in the state lies with VDAC's fertilizer, lime and motor fuel section. Again, the program of sampling, inspection, and registration is used to insure truth-in-labeling as to content and claims and compliance with other provisions of the state law. Fertilizers must be within the prescribed limits as to deficiencies or excesses of certain plant food elements. Lime must also meet certain standards as specified by law and the department's rules and regulations in order to be sold as such. Gasolines and other motor fuels are subject to specifications regarding content, percentage of certain substances, advertised octane rating, etc.

Pesticides And Hazardous Substances

All pesticides to be sold in Virginia must be registered with the department's pesticides and hazardous substances section. These "economic poisons" must be properly labeled as such.

Instructions concerning contents, the fact that it is poison, etc., are required, and collection and examination of samples to determine compliance with the law are made to prevent improper handling or application.

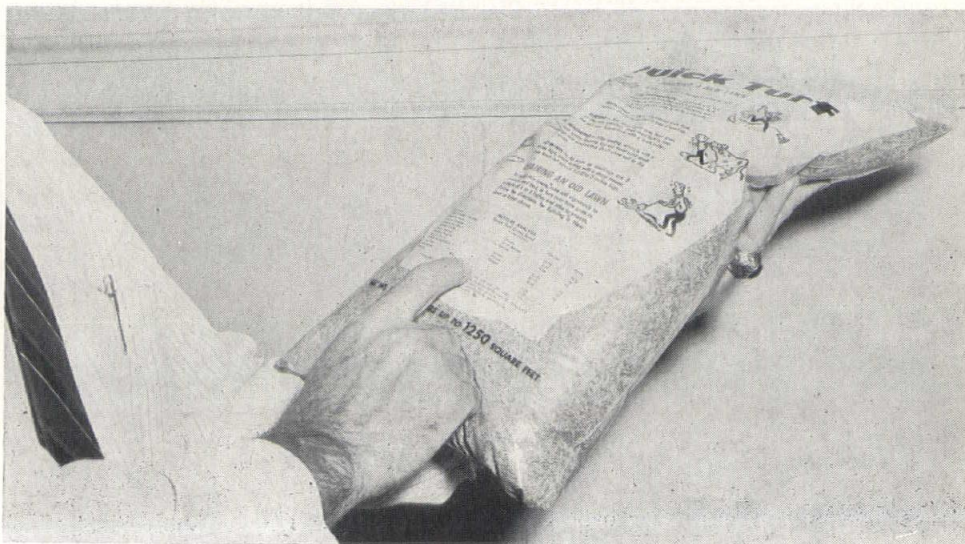
This section is also on the lookout for substances which could be hazardous to household users. It may seize, stop the sale of, remove, or destroy substances that are found to be hazardous and not labeled correctly with the proper cautionary statements called for by the law.

Food distribution points are inspected to determine if hazardous substances and pesticides are being stored and handled in accordance with good warehousing practices to lessen the chance of contaminating food and feed products. All packaging facilities in the state handling hazardous substances are also inspected to determine if labels being used comply with Virginia requirements.

Seed And Sod Laws

Under the seed law, VDAC is responsible for sampling, inspecting and testing agricultural, vegetable, flower, tree, shrub, lawn and turf grass seeds sold in Virginia. Standard tests include germination and tests for me-

A member of the seed and sod section is checking the labeling on a bag of turf grass seed.





A weights & measures inspector places the department seal on this gasoline tank to denote that it has been tested and approved for accuracy in metering that product.

other regulatory programs, is in the technical division of the department.

Paint Law

Under Virginia's paint law, all paints to be sold legally in the Commonwealth must be registered with and approved by VDAC. Any paint "being exposed or offered for sale" in violation of the Virginia Paint Law may be prohibited from sale, use or removal by written order until it has been brought into compliance or legally disposed of.

Paints registered for sale are chemically analyzed and physically tested by the paint laboratories to detect any misrepresentation as to use or content that would prohibit sale in Virginia. Paint found on the market not in compliance with the law is subject to seizure on complaint of the department to a court of "competent" jurisdiction. Condemnation is not ordered without first allowing the defendant to apply for release or permission to process or relabel his product so that it will comply with the law.

Annually, the department responds to reports across the state concerning paint frauds. The violators are often itinerant painters trying to make fast money or "representatives" of out-of-state paint manufacturers attempting to market unregistered paint through fraudulent promotion and franchises. With the assistance of local Better Business bureaus and local law enforcement officials, the department is curtailing such unscrupulous business practices.

Nursery And Plant Pest Inspection

Whenever a consumer buys an ornamental plant for his yard, nursery inspection and certification has already made sure that the purchase was grown in an atmosphere reasonably free of harmful plant diseases and insect pests. Plants inspected at the retail outlets, including nurseries, fall into the following classes: roses, broad-leaf evergreens, conifers, flower-

chanical purity from inert matter and weed seeds. The law provides that the seller is bound by his written or printed statements. The department makes careful inspections of seed, all labels and then tests the seed for compliance.

The seed law is basically truth-in-labeling legislation. The law was written on the assumption that the purchaser knows what he wants and by reading the label can tell if the seed fills his needs. However, special limitations are placed on the sale and distribution of seed containing certain weed seed which are noxious.

Prior to the sale of any lawn or turf seed mixture, the container for each mixture of 50 pounds or less must be submitted to the department for approval and registration. This requirement has proved very effective in protecting the consumer by preventing mixtures with false and misleading

statements from reaching the market.

With the expansion of the sod industry, various sod organizations across the state have attempted to improve the quality of sod being marketed in Virginia. In recent years, the seed section has also been charged with the administration of the sod law. As with the seed law, this newer law provides for a program of sampling and inspection to insure proper labeling of sod, plugs and sprigs.

Unlike the preceding programs of regulatory services, these last two are conducted entirely by the sections which administer them. Nursery and plant pest inspection, for example, is conducted by the same section that administers the laws instituting the program. In the case of the paint law, the laboratory activities are closely aligned with the investigative and administrative work. It is for this reason that the paint law section, unlike the

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A VDAC bee inspector is shown checking a hive for signs of American Foulbrood.

ing shrubs, fruit and nut trees, and small fruits.

The future of the commercial vegetable transplant business in Virginia looks good. Quality, pest-free transplants are in demand by the "weekend gardener" as well as the commercial grower. Again, the department provides a program of inspection to insure compliance with standards of quality and health.

The daffodil is grown and sold in large numbers throughout Virginia. This has necessitated a program of daffodil inspection during the fall and spring of each year. Fall inspection involves the bulb while spring inspection is concerned with plant foliage.

From early spring to late fall, the bees are under scrutiny in an attempt to control the contagious bacterial disease called American Foulbrood. Efforts are directed primarily toward bees which are moved for the honey flow and those used in orchards for pollination.

Personnel from the nursery and plant pest sections also spend time answering the many requests they receive from home-owners, gardeners, and producers who call or write for information. During each year, many insect and disease specimens of ornamental plants, shade trees, lawns, household and structural pests, are received for determination and control recommendations. Whenever it is necessary, the department helps to organize a full-scale plan of action where the problem is widespread and severe.

Standards—Weights and Measures

"Maintaining an honest balance between the buyer and seller"

By ROY SEWARD

Information Technician, VDAC

OF THE MANY consumer services performed by the department, the institution of a standard weights and measures program was one of the earliest. In fact, weights and measures legislation was among the first laws enacted by the Old Dominion's Colonial government.

Administered by the weights and measures section, the purpose of this program is to maintain an honest balance between buyer and seller in Virginia's marketplaces. Generally, this program includes the inspection and testing of commercial weighing and measuring devices of all types from platform scales that handle trucks to small produce scales, as well as gasoline pumps at service stations and fuel oil meters that are used to deliver home heating oils.

Today great changes have added a new dimension to the weights and

measures program. Most commodities are now sold in a prepackaged and preweighed manner. The consumer now accepts at face value the individual packaged commodities offered on grocery store shelves. Because of this acceptance, weights and measures inspectors must checkweigh these prepackaged items all across the state as an aid and protection to both the consumer and retailer.

In addition to package checkweighing, the section has placed special emphasis on the labeling program. Specific information is required on a package label, and it is the weights and measures section's responsibility to make sure that this requirement is met. The use of misleading terms such as "jumbo", "giant", "full", etc. as well as misleading containers are prohibited under this program.

The newest area of weights and measures work is that of advertising. Since advertising is very influential in developing consumer buying patterns, any truth-in-labeling program would have to include truth-in-advertising. In order to administer the law, members of the section must naturally spend considerable time in contacting chain stores, grocers and local newspapers. As a result of these efforts, tremendous improvement has been noted in grocery newspaper ads, handbills, and window and in-store displays.

A new Federal program of supplying the state with new standards will enable the weights and measures department to become the measurement center for the state serving industry, education, and research centers. Virginia will receive the new standards by 1970.

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Laboratory Protection for the Consumer

By ELEANOR R. ANDERS
Information Officer, VDAC

THE LABORATORIES of the Virginia Department of Agriculture and Commerce play a vital role in the overall work of the department, in addition to providing a wide variety of services to the citizens of the Commonwealth.

Most of the products in commerce which are regulated by quality control laws require analytical appraisal by VDAC. Testing of the products is done primarily by the Division of Technical Services. This division operates in conjunction with the Division of Regulatory Services by running tests and analyzing samples collected from the market by regulatory inspectors. Its services when required are also available to other divisions and other state agencies. In one way or another, its activities affect the daily lives of all the citizens in Virginia.

The division is comprised of seven laboratory sections responsible for analyzing samples required for proper enforcement of the various laws administered by the department.

Six laboratories make up the food and drug section—medicated feed and animal remedies, food, bacteriology, mycotoxin, human drug and bio-assay.

The primary function of the human drug laboratory is the analysis of drugs and cosmetics in accordance with the Pharmacy and Drug Act. The composition, branding, possession, dispensing and sale of drugs, poisons and narcotics are regulated by the State Board of Pharmacy. All samples are submitted through the Board of Pharmacy and reported to their administrative officer.

Samples received through the Board are analyzed for routine determination, as service samples and for investigational purposes. Many analyses made are the results of requests by physicians, hospitals and police agencies. A little known service performed by the human drug laboratory is the analysis of preparations made up by applicants for the state pharmacist's license.

In the food laboratory, VDAC employees are charged with the responsibility of determining the presence or absence of insect and rodent filth in food items such as candies, baked goods, cereal products, canned goods and beverages. They are also responsible for measuring the amount of adulteration, either physical or chemical, in meats, canned goods and other

food products. Food protection has become increasingly complex during the past few years because more preparation for the consumer takes place before the products hit the grocery shelf. The advent of new food additives such as preservatives, vitamins, flavoring, coloring and other innovations has created many analytical challenges.

The medicated feed and animal remedies laboratory is responsible for analyzing the drug content of such materials. It is consolidated into one laboratory which makes 40 different types of assays for antibiotics, sulfa drugs, arsenicals and other active drug ingredients. The contents must agree with label statements and concur with what is specified by the law.

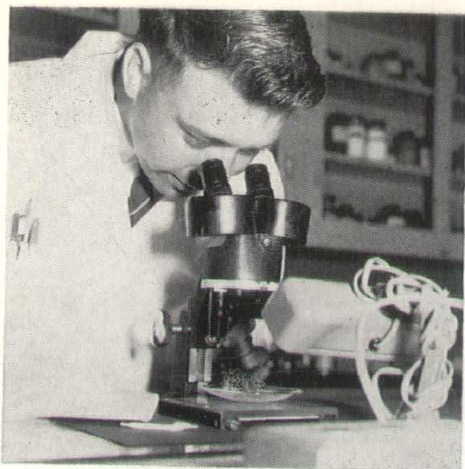
In the bacteriological laboratory foods, feeds and drugs are analyzed for contamination caused by micro-organisms. Particular emphasis is placed on the detection of salmonella, which is an organism responsible for food poisoning. There are approximately 1,200 different types of salmonella, and during the past fiscal year this laboratory was expanded to allow for salmonella serotyping (detailed identification of strains.)

The antibiotic potency of human drugs, animal remedies and medicated feeds is determined micro-biologically by the bio-assay laboratory. The lab also provides technical assistance to the seed laboratory section and works in close cooperation with all of the aforementioned laboratories.

The mycotoxin laboratory tests primarily for the presence of aflatoxin—a mycotoxin produced by the metabolism of certain strains of the mold *Aspergillus flavus*. Both the chemists and the laboratory itself have been certified and approved for the work by the United States Department of Agriculture. During the 1967-68 fiscal year the laboratory was enlarged with the capability of testing a maximum of 30 samples daily and with a potential capacity of 60 samples per day. The main purpose behind the expansion of the lab was to meet the increasing needs of the peanut and food industry now confronted with natural contamination by aflatoxin and other mycotoxin substances which are considered to be health hazards when present in significant quantities.

An analyst makes a careful examination of the potential viability of seeds. During the past fiscal year, the seed laboratory tested a total of 8,791 seed samples.





Tim King of the food and drug section analyzes a sample which could be marijuana. Materials such as catnip, rose petals, parsley, oregano and other spices have been "pushed" as marijuana.

VDAC's feed laboratory, a section in itself, is charged with the responsibility of conducting chemical and microscopic analysis of official samples submitted by the division of regulatory services for the enforcement of the Virginia Commercial Feed Law and the Virginia Canned Animal Food Law.

Tested here are commercial stock feeds, canned animal foods, and mineral supplements. Stock feed is subjected to a chemical breakdown of nutritional ingredients—protein, fat, fiber, moisture content, ash and minerals. Microscopic examination for ingredients is made to assure that contents agree with labeling. The laboratory also tests a number of service samples for farmers, county agents, state agencies and others.

The fertilizer and miscellaneous laboratory section is comprised of the fertilizer laboratory, the atomic absorption laboratory and the miscellaneous laboratory.

The fertilizer laboratory provides the technical services needed to assure that commercial fertilizers sold in the state meet the guaranteed analysis under which they are registered and labeled. Under official methods of the Association of Official Analytical Chemists, tests are conducted in accordance with the Virginia Fertilizer Law and discrepancies are reported to the division of regulatory services for appropriate action. This lab provides tests for potassium and phosphorus in samples originating in other laboratory sections.

The atomic absorption laboratory conducts analyses of fertilizers for magnesium and micro-nutrients and a wide variety of samples for the presence of other elements in varying amounts.

In the miscellaneous laboratory agricultural liming materials are tested for compliance with the Virginia Liming Law, and fertilizers are examined for boron, calcium and sulfur. This lab also supports other laboratories on a wide variety of materials, including minerals, pesticides and water for heavy metals. It occasionally performs tests for individuals to determine if economically valuable minerals are present and would be worth mining. Promising finds are referred to the State Geologist for site evaluation.

Constituting the paint and motor fuels section of the division of technical services are the paint and motor fuels laboratories.

The paint lab controls both regulatory functions and laboratory procedures involved in enforcing the Virginia Paint Law. Paints are sampled for analysis and then tested to determine whether or not the information on the label conforms with the requirements of the law. All paint sold in Virginia must be registered, and regulations prohibiting misleading labeling and advertising claims are strictly enforced.

The motor fuels laboratory performs tests on both gasoline and diesel fuels to assure compliance with the Virginia Gasoline Law. Samples are taken from service stations, tank trucks and storage trucks by regulatory inspectors and submitted for analysis to insure that the

fuel used by Virginia's consumers is of a reliable quality.

The pesticides formulations laboratory and the pesticide residues laboratory constitute the pesticides laboratory section.

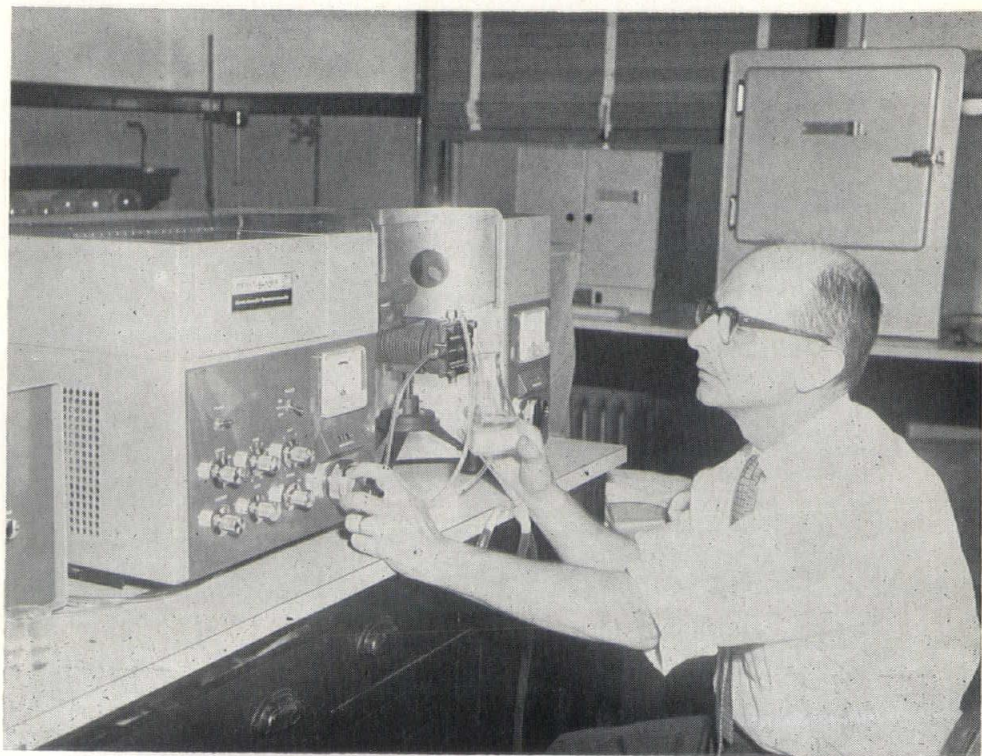
Testing performed by the formulations laboratory is of a "quality control" nature. It assures agreement with label statements and checks to make sure that the product is free of adulteration. Most of these samples are also submitted by regulatory inspectors from products being offered for sale in the state.

The residues laboratory monitors the improper or excessive application of pesticides. It is responsible for detecting harmful residues in apples, dairy products, hay and feeds, vegetables and other products. Its activities involve samples from food and dairy inspectors and other state agencies.

Like the feed section, the seed laboratory section is an entity in itself. It is primarily concerned with testing seed for the enforcement of the Virginia Seed Law by the seed regulatory section. An additional responsibility is the testing of seed in the Certification Program to determine whether or not it meets laboratory standards. Considerable service testing is also performed for farmers, dealers and others, insofar as time and facilities permit.

The methods development section of

In the fertilizer laboratory, Jesse Swann uses the atomic absorption spectrophotometer to determine the presence and quantity of such elements as zinc, sodium, calcium, magnesium and copper.



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the division of techical services acts as a liaison between the other analytical laboratories and, as its name implies, develops new or special ways of performing analyses. Ideas for new equipment and laboratory procedures originate here, and new ideas are tested by the laboratory before being put into use.

Although the laboratories of the division of technical services perform the bulk of the department's analytical work, testing is also conducted by the seven regional laboratories of the division of animal health and dairies.

Both regulatory and diagnostic work is performed in these facilities, each of which is under the supervision of an area veterinarian and a lab supervisor.

Thousands of milk samples are processed for regulatory purposes each year, and animal disease control and eradication programs are facilitated by the regulatory and diagnostic functions of these laboratories. Voluntary diagnostic procedures for livestock and poultry producers are carried out by request, and blood testing of poultry and turkeys is performed for the division of markets in cooperation with the diagnostic work of the division of animal health and dairies.

In reflecting on the work of the department's laboratories, J. W. Midyette, Jr., director of the division of technical services said, "The behind the scene contributions that our laboratory personnel make in support of the regulatory and service programs of VDAC, as well as other state agencies, are invaluable. They analyze in excess of 40,000 samples annually, involving over 130,000 laboratory determinations on an operational budget of about 15¢ per citizen. These people are to be commended for their untiring efforts on behalf of their fellow citizens."

Presently under construction in Richmond is a new building, which, when completed, will house all of VDAC's analytical and diagnostic laboratories now at numerous sites in Richmond. With the added convenience of a single location for the department's laboratory testing, increased efficiency is certain. This is just another phase of VDAC's continuing effort to protect the citizens of the Commonwealth from fraud and misrepresentation.

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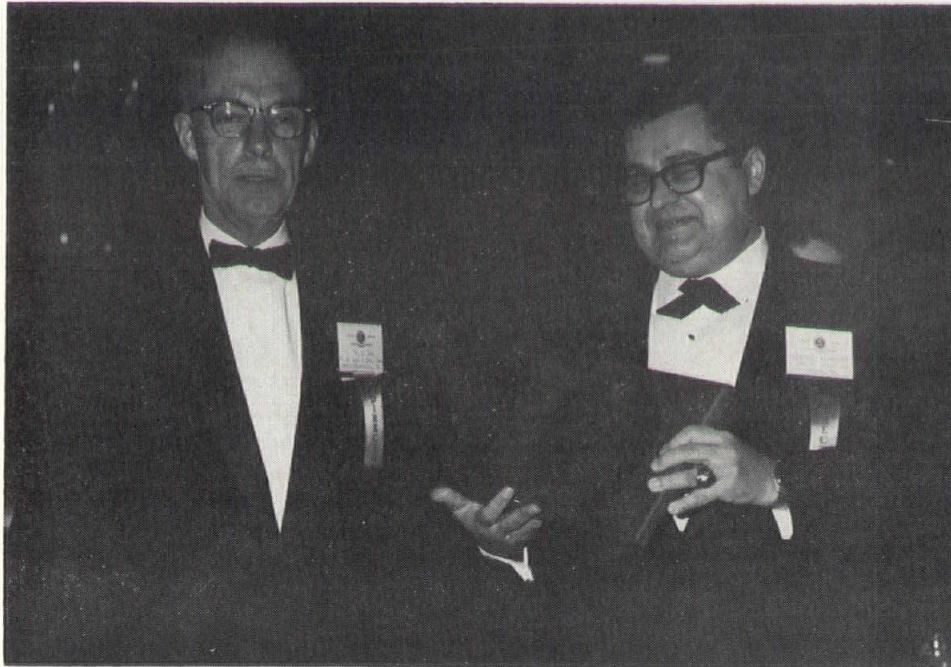
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R. E. LEE IS NAMED A.G.C.'s CONSTRUCTION MAN OF THE YEAR



R. E. LEE RECEIVES AWARD FROM ALEXANDER ALEXANDER

● Slight of build, but a giant in the construction field is R. E. Lee, Chairman of the Board of R. E. Lee & Son, Inc., Charlottesville. Mr. Lee was named as Construction Man of the Year by the Virginia Branch, Associated General Contractors of America, and presented a plaque at the Virginia Branch Annual Convention at Hot Springs, February 18, 1969. The Selection Committee for The Construction Man of the Year had very little problem deciding to whom this award should be presented. The first rule governing the selection for this award is: "The award will be conferred upon some person whose achievements, leadership and service to the Construction Industry during the calendar year of 1968, and where personal character and ability make him, above all others, deserving of this distinction and recognition." None could fit this description better than "Bobby" Lee (as he prefers to be called).

A native of Brooklyn, he came to Virginia in 1911 when his family moved to Charlottesville. Except for World War II, he has been in con-

struction in the Charlottesville area since he graduated from the Engineering School at the University of Virginia in 1929. He has been a Registered Professional Engineer in Virginia since 1930. In 1942 he was employed as a Construction Superintendent by Bellemead Development Corporation in New Jersey and later as an Assistant Engineer by Doyle & Russell of Richmond at Camp Patrick Henry. Commissioned in the Corps of Engineers in 1943 he served three years in New Guinea and the Philippine Islands.

Mr. Lee has served as a Director, Vice President and President of the Virginia Branch, A. G. C., prior to assuming his present duties as a National A. G. C. Director. Considerable time is spent on National A. G. C. affairs, however, he continues to devote time, effort and a great deal of interest to the affairs of both his local district and the Virginia Branch.

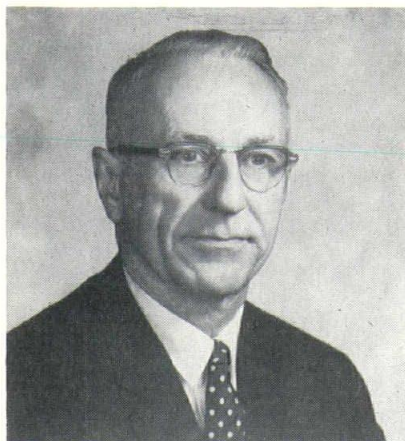
It has often been said "If you want something done—give it to a busy man," and this is quite apt in the case of "Bobby" Lee for his contributions to the community are many and signifi-

cant. He was a member of the original board of the Charlottesville Redevelopment and Housing Authority and had a large share of responsibility through this Authority for Charlottesville's first Urban Redevelopment Program. Mr. Lee was a member of the Charlottesville City Council from 1960 until 1964. He is currently serving as a member of the Charlottesville-Albemarle Merger Committee, sponsored by the Chamber of Commerce, which is one of the most important activities concerning the Charlottesville local government at this time.

R. E. Lee is President of the Charlottesville Savings and Loan, and a former Director of the Virginia Engineering Foundation and The Virginia Foundation for Architectural Education.

Although "Bobby" Lee's modesty makes it most difficult to list his many contributions to his fellow man's welfare, it must be said that—he is an outstanding gentleman, an excellent contractor, who has worked diligently in the A. G. C. for the benefit of the industry and his community.

FOR THE RECORD



SAMUEL H. SHRUM

To All Members of the Virginia Branch A.G.C.

(This letter from the newly installed President of the Va. Branch A. G. C. was sent to all members.)

It is reprinted here for the information of any who may have missed it and for all interested parties in the industry.)

This is my first letter to you serving as President of your Virginia Branch A.G.C. and as you will note it is on our new stationery which I hope you like.

All of you who attended the Annual Convention at Hot Springs I think will agree that it was an excellent one, most informative and helpful. Many commented that it was the best convention

ever held by the Virginia Branch. To those of you who were not able to attend, I am sorry you could not be with us and hope you can be present next year. We will have to go some to improve on the '69 Convention!

Your President was installed at Hot Springs by National President, Fred G. Mast, who quoted from *I Cor. 3:10*, "According to the commission of God given to me, like a skilled master builder I laid a foundation, and another man is building upon it. Let each man take care how he builds upon it."

"The building upon it" which I hope to do with the A.G.C. skilled builder during the coming year is made up of many things, a few of which I list:

1. Official visit by the President and A.G.C. Staff to every district with afternoon sessions preceding the night meeting for discussion of problems and work in the local district. Local District Committees should be set up to make A.G.C. more effective.

2. The establishment of an Annual Construction Day in every Virginia district (see February issue of *Constructor Magazine*, page 25) to recruit manpower from high schools and colleges.

3. Improve the image of the A.G.C. contractor in the state and glamorize more the role of the construction worker and his part in helping to build America.

4. Continued emphasis on membership growth and expansion.

5. Continued emphasis on safety.

6. Continued emphasis on proper state and national legislation. Remember the Legislative Luncheon in Washington on April 16, 1969. All of you are invited.

If we work together much can be accomplished toward improving the industry in which we are all so heavily involved.

I am looking forward to seeing you at your District Meeting and discussing A.G.C. business with you.

Cordially yours,
Samuel H. Shrum, President

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Architectural Firm Announces New Associates

Vosbeck-Vosbeck-Kendrick & Redinger, architectural, engineering and planning firm of Alexandria, Virginia, has announced the promotion of J. Everette Fauber, III, Marlin G. Lord, and Charles P. Murray, to Associates of the firm. All three are members of the American Institute of Architects, and are registered in the Commonwealth of Virginia.

J. Everette Fauber, III, attended Christchurch School, Christchurch, and was graduated Bachelor of Architecture, University of Virginia. Mr. Fauber, active in community affairs, is a past president of the Mount Vernon Jaycees, serves on the State Board of Directors of the Virginia Jaycees and is a corporate member of the Alexandria Boys Club. He is presently serving the Virginia Chapter, AIA, as Chairman of the State and Chapter Organization Committee. He is engaged in management of Federal Government projects, schools, office buildings, and facilities at the Woodrow Wilson Rehabilitation Center in Fishersville.

Marlin G. Lord attended the University of Minnesota where he received a Bachelor of Arts in Architecture and a Bachelor of Architecture. He is a Member of the Washington Metropolitan Chapter and the Northern Virginia Section of the American Institute of Architects. He has had previous employment with several Minnesota architectural firms and the Minneapolis Housing and Redevelopment Authority. He is involved in the firm's analysis of the systems approach to architectural project management. Currently, his project assignments include the planning, design and coordination of community center schools and the environmental design for computer centers.

Charles P. Murray attended the University of Virginia School of Engineering and the School of Architecture where he received a Bachelor of Architecture degree. Prior to coming to VVKR, Mr. Murray served with the Corps of Engineers and the U.S. Army in Europe. He is a member of the Virginia Chapter of the American Institute of Architects. His current project assignments at VVKR are the development of comprehensive health care facilities, special education centers, and commercial and office complexes.

THOMPSON-ARTHUR PAVING CO. AWARDS SCHOLARSHIPS



• It was announced by Thompson-Arthur Paving Company that two students have been selected to benefit from a \$4,000 grant made by Thompson-Arthur to North Carolina Agriculture & Technical State University Foundation in Greensboro, N. C.

The students, Wallace Calloway, a junior from Richmond and Alfonzyc Chisholm, Jr., a Portsmouth sophomore, were each awarded \$500 scholarships and also offered summer employment by Thompson-Arthur.

Under terms of the grant, the Greensboro-based firm has agreed to contribute a total of \$4,000 over a four-year period to A & T which is presently engaged in a campaign to raise \$1 million for faculty and curriculum development programs.

The University, through its foundation, will match Thompson-Arthur's grant, making it possible to give scholarships to four students each year.

Both Calloway and Chisholm, architectural engineering majors, said they were pleased to have won the Thompson-Arthur awards. "To receive a scholarship of this type can be very rewarding to a student," Chisholm said.

"Not only does it enable the student to continue his education with less financial strain, but it also gives him a chance to practice while he learns."

A & T State University, one of the top predominantly-Negro institutions in the nation, has more than 4,000 students. Under the leadership of the current president, Dr. Lewis C. Dowdy, A & T has sought to maintain close ties with all segments of business and industry.

Previously, the University was selected to participate in the "Cluster Concept," a working relationship with 22 national firms. The program is an outgrowth of Plans for Progress, a voluntary effort by the American leaders in business and industry to aggressively promote and implement equal employment opportunity.

The A & T Foundation is the primary source of raising funds for which state appropriations are not available. Contributions such as that from Thompson-Arthur will be used to provide faculty study grants, research projects, special equipment, special scholarships and distinguished faculty chairs.

(Please see page 28)

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Pays you \$100 each week when hospitalized
Pays \$75.00 each week when your wife is hospitalized
Pays \$50.00 each week when each eligible child is hospitalized
Pays \$350 each week if you and your wife are injured and hospitalized at the same

For a Modest Premium of \$7.95 each Month after the first month!

Under the All Family Plan, coverage commences as of the effective date of policy for the married dependent children (including future children attaining and over three months of age) residing in the household of the insured for accidental injury. Coverage for new sickle cell anemia, commences after thirty days. Maternity benefits are covered ten (10) months after po

PLAN 2. HUSBAND AND WIFE PLAN

Pays \$7,500 Maximum Aggregate of Benefits
Pays you \$100.00 each week when hospitalized
Pays you \$75.00 a week when your wife is hospitalized
Pays \$350.00 a week when you and your wife are injured and hospitalized at the same time
For a Modest Premium of \$5.95 each month after the first month!
This plan is designed for the couple who either have no children or whose children are i

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JOHN L. EPPS, JR., *President*

THE COLONIAL HOSPITAL PLAN

APPLICANT'S NAME (Please Print) First Middle Initial Last

ADDRESS No. and Street City State Code

DATE OF BIRTH:	AGE	SEX
Month		
Day		Male
Year		Female

IMPORTANT: THIS ENROLLMENT FORM MUST BE MAILED NO LATER THAN MIDNIGHT OF: JUNE 1, 1969

SELECT PLAN DESIRED (Check One Only)

- ☐ I All Family Plan
☐ II Husband-Wife Plan
☐ III One-Parent Family Plan
☐ IV Individual Plan

IF ALL FAMILY OR HUSBAND-WIFE PLAN IS DESIRED, GIVE
FOLLOWING INFORMATION ON WIFE:

Name: _____ Middle Int. _____
Wife's First
Wife's Date
Of Birth: _____ Month _____ Day _____ Year

Do you have other insurance with this Company? Yes ☐ No ☐

If "Yes", give policy number and Plan _____

I have enclosed my first monthly premium of \$1.00 and hereby apply to the COLONIAL LIFE & CASUALTY COMPANY OF VIRGINIA, INC. for the Colonial Hospital Policy and Plan thereunder as selected above. I understand the Policy is in force until actually issued.

The Undersigned certifies that he has read, or had read to him, the completed enrollment form and that he understands that any false statement or misrepresentation therein may result in loss of coverage under this policy.

In my absence, I constitute and appoint the president of the Company my agent and attorney for me, in my name, to stand in my stead to vote as my proxy at any regular or called meeting of the Company. Should I be present, it is understood my proxy will be returned to me. This proxy is good until revoked. Annual Meeting 12 Noon, Second Tuesday, January, at the Company Office, Richmond, Virginia.

DATE _____ SIGNED _____

Applicant's Signature

(SIGN—DO NOT PRINT)

PLEASE MAKE CHECK OR MONEY ORDER PAYABLE TO COLONIAL LIFE & CASUALTY COMPANY OF VIRGINIA, INC.

HOSPITAL POLICY DIRECTLY TO YOU.

CARE INSURANCE REGARDLESS OF YOUR AGE OR
CONDITIONS ARE ASKED. PRE-EXISTING CONDITIONS ARE COVERED
IN FORCE 2 YEARS.

*Cancelled unless renewal is
the same form number.*



AND EXPIRES JUNE 1. ACT NOW!



PLAN 3. ONE PARENT FAMILY PLAN

Pays you \$100.00 a week when hospitalized

Pays you \$50.00 a week when each eligible child is hospitalized

For a Modest Premium of \$5.95 each month after the first month

This plan is designed for the family where there are dependent children with only one parent. Coverage extends to the parent and all unmarried children* (not to include any future children) residing in the household of the insured.

*Between the ages of 3 months and 21 years.

PLAN 4. INDIVIDUAL PLAN

Pays you \$100.00 each week when you are hospitalized

For a Modest Premium of \$3.50 per month after first month

This plan is designed for the single adult or person who desires coverage only for himself. Ideal to supplement Medicare for the senior citizen as is the Husband-Wife Plan.

BENEFITS UNDER ALL PLANS ARE PRORATED DAILY

SENIOR CITIZENS

If you are over 65 now, or when you become 65, the following modest monthly increase applies.

Female on all-family or husband-wife plan.....	\$2.25
Female on one-parent or individual plan.....	\$3.00
Male on any plan.....	\$3.00

AND THERE ARE INCREASING BENEFITS TOO:

In addition to the maximum (Aggregate of Benefits) provided in your policy, there is added to your maximum the amount of each premium paid as long as your policy is in force! Therefore, according to the plan you select, you begin with up to \$10,000, \$7,500, or \$5,000. These amounts are increased as premiums are paid.

FACTS YOU SHOULD KNOW ABOUT THE PLAN

Under any plan and coverage you choose, benefits commence on the day you enter the hospital. (Nursing home, convalescent or self-care units and federal hospitals are excluded.) And your payments continue for the total amount of time you are hospitalized—until the aggregate total of your benefits are exhausted.

Coverage begins immediately. (For new illnesses, there is a 30-day waiting period. All pre-existing conditions are covered after the policy has been in force for 24 months.) Of course, there are some exceptions. The policy or its complications except in the All-Family Plan—acts of war, mental disorders, drug or alcoholic abuse, or conditions covered by Workman's Compensation or Employer's liability laws.

Long Protection. As long as your monthly payments are paid, your insurance is in force. Colonial Life will not cancel your individual policy unless all policies carrying the number of your plan are dropped or the maximum (Aggregate) of benefits has been paid. (The company does, of course, reserve the right to provide exceptions in premiums on all policies of the same form number.)

Pay cash the way you see fit. Benefits are paid by Colonial directly to you for your own personal use. You are not obligated to use your cash in any particular way. Other Citizens can supplement Medicare.

Others have cash for their family when the breadwinner is disabled. Others have money necessary for babysitters when mother is hospitalized.

Others have the security of extra money to meet those unexpected bills in time of need.

WHOLE THING IS UP TO YOU—To be eligible for these benefits you must make the choice. Colonial Life is your own agent. You choose the plan you want, you file your own claims, you choose how to use the money you choose. You are never bothered by an agent. (Of course, our entire home office staff of insurance experts stand ready to help you with any questions or problems.)

We do not maintain an expensive staff of field agents, we are able to pass on these savings to you in the form of low, low premiums.

For any reason you are not satisfied with your policy, you may return it within ten days and your money is refunded—NO QUESTIONS ASKED!

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Act Today! Get in on the special savings possible from now until June 1, 1969.

During this period, you receive 31 days coverage under any plan you choose for only \$1.00. Don't miss out on this amazing low, money-saving offer from Colonial Life—a Virginia company serving the insurance needs of Virginians.

Colonial Life and Casualty Company is a Virginia company—organized, licensed and incorporated in Richmond, Virginia in 1949. Its officers and directors are all Virginians with years of experience in the insurance and legal professions. Enjoy the security and trust of dealing with fellow Virginians serving your insurance needs.

Should you relocate out of Virginia once you are covered by Colonial Life, your policy still receives our expert attention. All you need do is keep the company advised of your new address.



Mamie Alexander has been running zero-defects for six months now.



Jack Bloom in Sales has just exceeded his own quota.



Ginny Johnson has been with the firm for 16 years, come February.



Marty Brown in Forwarding hasn't missed a day in five years.



Carl Higgins just submitted a whopper of a suggestion.

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Roanoke Construction Firm Promotes Three

• Directors of Martin Bros. Contractors, Inc. of Roanoke, have elected Robert L. Price Jr., vice president; Mrs. William R. McGraw, secretary; and George R. Martin Jr., treasurer.

George R. Martin, president of the 55-year-old firm on Patterson Ave., S. W., announced the promotions.

Price attended Emory and Henry college and was graduated from Virginia Tech. He and his wife, the former Barbara Brooks have two children.

Mrs. McGraw, a graduate of Virginia Southern College, has been secretary-bookkeeper for the company for 19 years. She is married to William R. McGraw, manager of the Pickwick Club.

The younger Martin, a graduate of Fork Union Military Academy, attended Virginia Western Community College and joined the firm more than four years ago. He is married to the former Brenda Carden.

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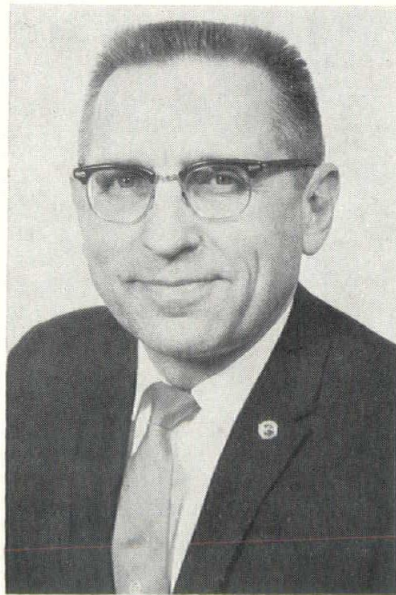
Boy Scouts. He is a deacon at the First Presbyterian Church.

Mr. Barranger is a graduate of Virginia Tech. is married to the former Jacquelin McClaugherty of Roanoke and has five children.

Mr. Merritt has been employed at Roanoke Iron and Bridge Works since 1957. His previous jobs included, Personnel Manager and Contracting Manager of Prison Equipment Division.

The Mullins, S. C. native is currently president of the Roanoke Manufacturers Association, a past-president of the Personnel Association of Roanoke and the Raleigh Court Lions Club and he is an Elder at Raleigh Court Presbyterian Church.

Mr. Merritt holds a B. S. Degree from Davidson College and an M. S. Degree from Georgia Tech. He is married to the former Betty Patrick of Kings Mountain, N. C. and is the father of three sons.



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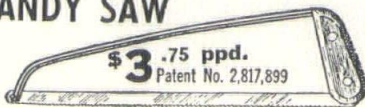
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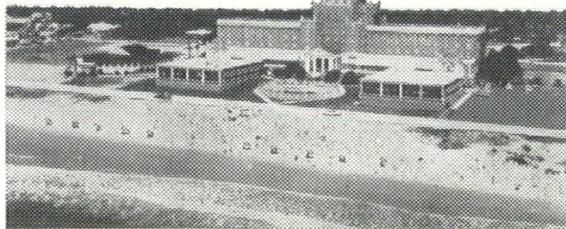
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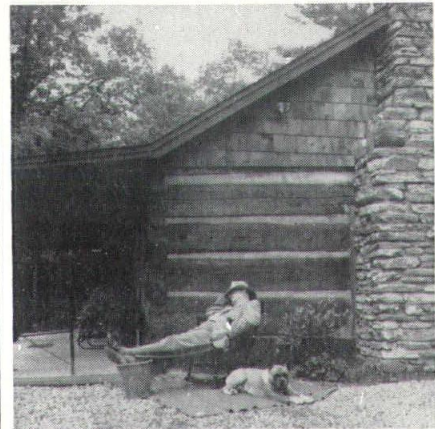
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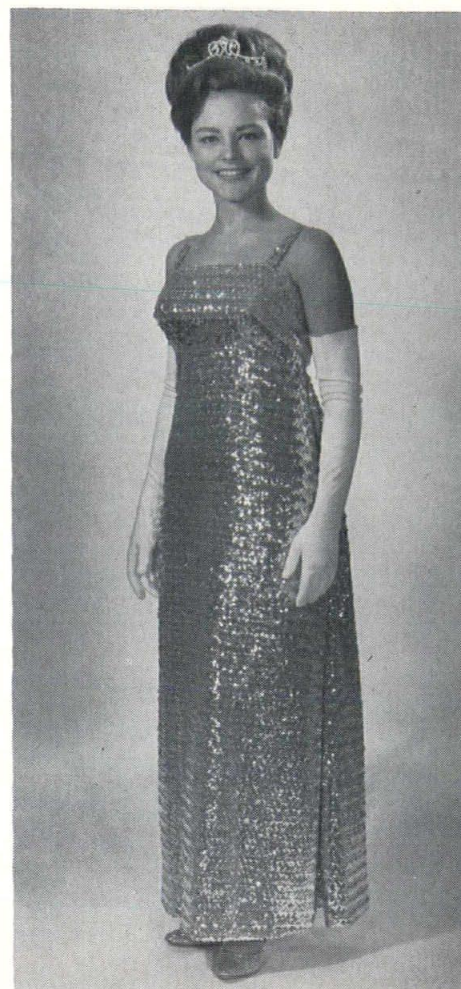
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Miss Virginia Makes South American Good Will Trip

Miss Virginia 1968, Miss Cherie Suzanne Davis of Clifton Forge, has added a new page to her appearance schedule with a trip to Ecuador, South America. "La Regna della Veerhenia" — the queen of Virginia—as she was called by the people she met on her trip, travelled to this charming South American country with a party of Winchester residents who flew to Ecuador for the festival of fruit and flowers at Ambato. Ambato is the "sister city" of Winchester. From all reports, the 20 year old beauty fell instantly in love with the beauty of the country and the warmth of its citizens. In making this trip, Miss Davis became the first reigning Miss Virginia to make an appearance in another country, and she was very well received by its residents.

The daughter of Mr. and Mrs. W. E. Davis, Jr., Miss Davis is a graduate of Alleghany County High School, and is a Junior at the Shenandoah Conservatory of Music where her major field is voice and her minor is piano. She has had special training in art, dramatics and dance. In the 1968 Miss America Pageant, she was a preliminary talent winner and semi-finalist.

Her year as Miss Virginia has been a busy but fulfilling one. She has appeared on TV, in local pageants, at bank openings, special store celebrations, fashion shows, parades, and 4-H Club and Girl Scout activities in addition to her South American trip. Though her reign ends in July, when a new Miss Virginia will be chosen, she still has much to do. The Dogwood Festival in Charlottesville, April 22-27 is on her agenda of appearances as is the Shenandoah Apple Blossom Festival. She has two concerts scheduled during May, one in Roanoke and one in Clifton Forge, and will appear at the meeting of the Virginia Federation of Business and Professional Women's



CHERIE SUZANNE DAVIS
Miss Virginia

Club in Richmond May 23, 24 and 25. The Miss Virginia Pageant, Inc. reports that she is booked for appearances every week-end in April and May with many appearances in between. All in all—a year to remember for any young lady, and a young lady to be remembered by not only Virginians but in this case, Ecuadorians too.

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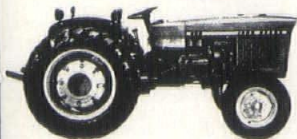
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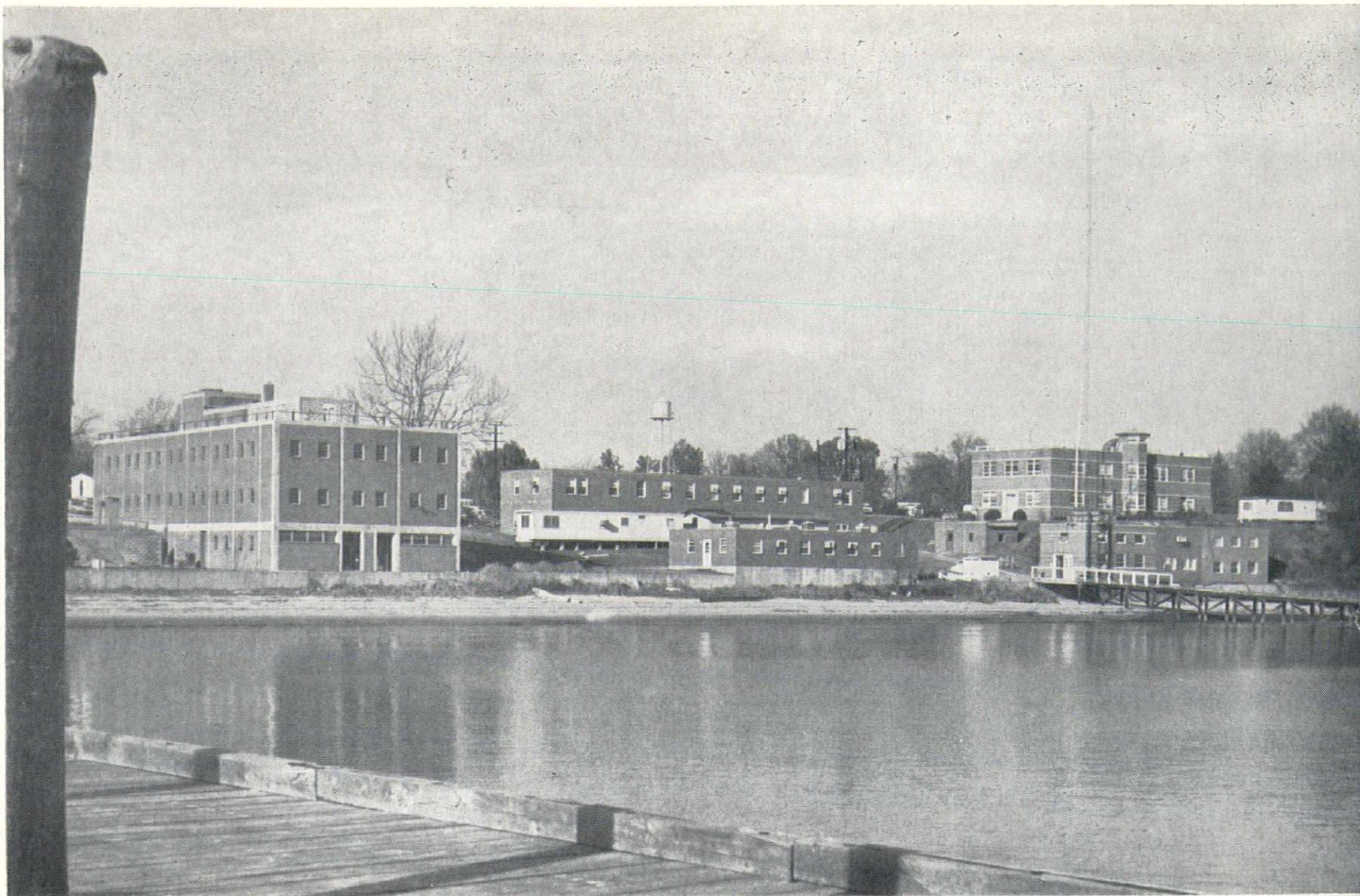
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Virginia's Scientific Movement Toward the Sea

The Story of

THE VIRGINIA INSTITUTE OF MARINE SCIENCE

by FRED C. BIGGS

SIGNIFICANT INVESTMENTS have been assigned to marine science or oceanography over the past 29 years by the General Assembly, making Virginia a leader in the scientific movement toward the sea. The bulk of these funds has been expended in research conducted by the Virginia Institute of Marine Science, which overlooks the lower York River from the heights at Gloucester Point. At this point its size places VIMS among the upper ten of all marine institutions (there are almost a hundred in the United States), and among the top three or four in amount of state support.

VIMS is also among the oldest American marine laboratories. Considering its founding slightly less than three decades ago, this sounds odd; however, development of modern

oceanography in this country went slowly until World War II when military and scientific studies of the ocean became a tactical necessity for winning the war. Attention of world powers has been focused upon the sea with varying intensity since.

The scientific achievements necessitated in part by that international crisis were an indication of the fruits possible through continued emphasis on research. Moreover, the need for new advances surged as a new and troublesome problem loomed . . . the world's population was increasing dramatically. Science had found answers to serious problems during the war years and many people began to anticipate solutions to developing peacetime problems. Many came to believe that at least some answers lay in greater understanding of the sea

and utilization of its resources. The oceans, covering some 71 percent of our planet, were expected to provide many of the ingredients needed to satisfy man's requirements: food, water, minerals and other material. This promise became especially attractive at a time when national leaders seriously pondered the dwindling of land resources.

Studies of the oceans and their estuaries increased as interest stirred. Even as new, useful information was obtained by marine science the need for additional data also grew due to increasing use of the sea. Harbors filled with ships loading and unloading. Shore-based cities began a still-spiraling population and industrial growth. More people, more factories, more ships and pleasure boats, and more waterfront homes placed increasing

multiple burdens upon tidal streams, estuaries and coastal beaches and marshlands. Coupled with these trends came greater demands for aquatic recreation. And so were accented two forces: multitudes who want the marine environment clean for recreational, aesthetic, commercial fishing, water supply and realty uses; and an equally large number who wish to use the system for harbors, assimilation, dispersion and transport of growing quantities of municipal and industrial wastes, and as a source of water for industrial cooling and processing. Paradoxically, some users fit both categories.

Such opposing demands upon our marine resources have not gone unnoticed by Commonwealth leaders. These factors have been considered in legislation and in resource planning and management by the Virginia State Government and its agencies, by other political sub-divisions and private and industrial groups. All of these factions are learning that proper legislation and application of sound management practices requires considerable information including much scientifically established fact. And this has fostered growing interest and investment in Virginia's principal marine research program at the Virginia Institute of Marine Science.

Perhaps needs and justifications for the state's commitment to marine science can best be illustrated by reference to some recent problems and relevant research activities of VIMS.

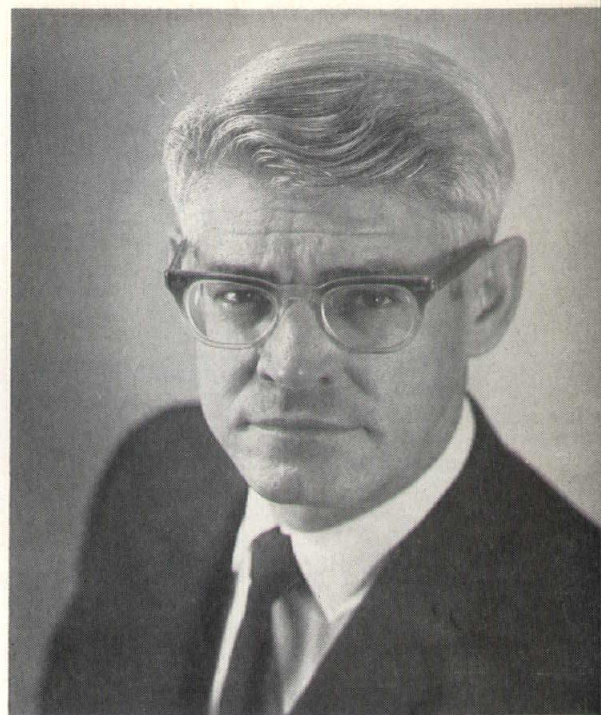
BEACH EROSION

On Ash Wednesday, March 7, 1962, waves from one of the most violent coastal storms in decades struck Virginia's coast. The powerful storm surge and steep waves vented nature's wrath on the shore, crumbling piers, undermining seawalls and seriously damaging many houses, cottages, hotels, and other commercial buildings in Virginia Beach. In its aftermath, Virginia Beach businessmen looked beyond the rubble to face a more serious problem: the beach had been chewed away, reduced to the bare wall in many places and to a narrow strand in others. Without the beach, prospects for the coming summer seemed bleak. To repair the damage a special tax upon rooms and meals was levied by the city council; plus funds and direct assistance from the state and federal governments provided the means to pump sand and replenish the beach. After a monumental effort this multi-million-

dollar ocean front resort was restored in time for the 1962 summer recreational season.

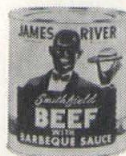
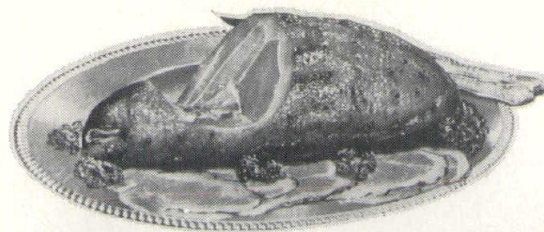
The Beach Erosion Board of the U.S. Army Corps of Engineers realized that research was needed in order to improve beach replenishment and stabilization programs at Virginia Beach. It called upon the Virginia Institute of Marine Science to conduct studies, and Dr. Wyman Harrison was assigned the research project. He was asked to examine the four most important factors acting to shape sandy coastlines: composition and response of beach materials (sand); and transport of beach sediments by wind.

Harrison uncovered two important facts: he learned that although the Corps of Engineers had been regularly replenishing the beach by pumping sand from Lake Rudee in the lower beach area, the size of the sand grain particles being pumped was generally too small to withstand the normal force of beach erosion. He suggested that coarse-grained sand be located and used to make greater gains in the "tug-of-war" battle with the sea. He



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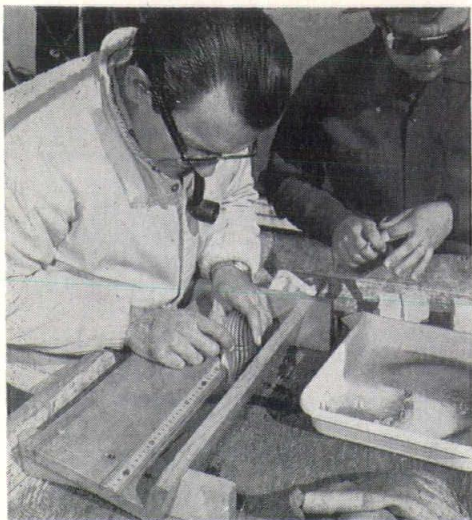


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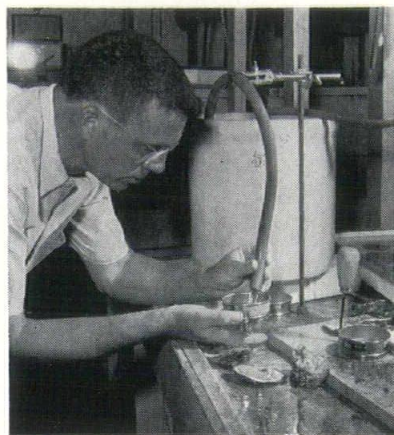
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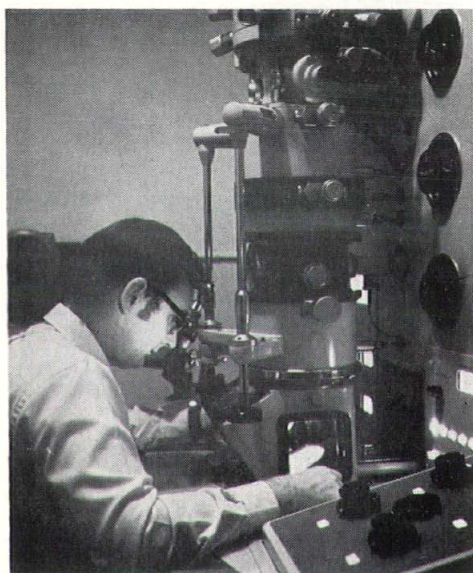
VARIED ACTIVITIES AT VIMS



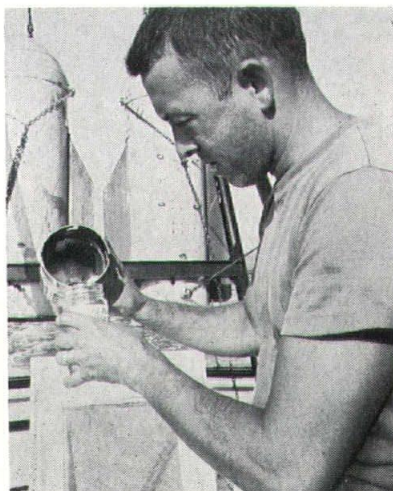
Dr. George Grant, VIMS Ichthyologist, is shown weighing, measuring, and tagging a striped bass as part of a special striped bass study now in progress at VIMS.



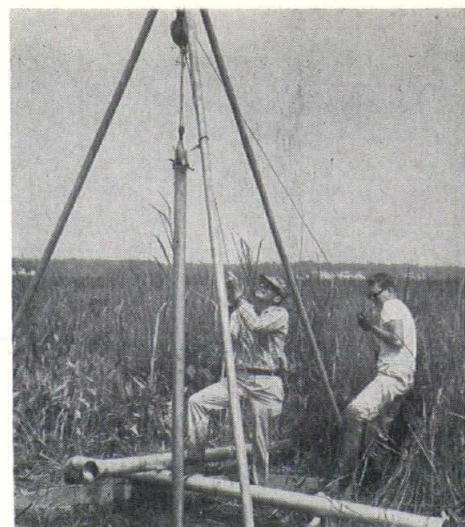
Dr. J. D. Andrews (above) directs oyster research at VIMS. He has been a member of the scientific staff since 1948 and has earned widespread acclaim for his work on oyster diseases here.



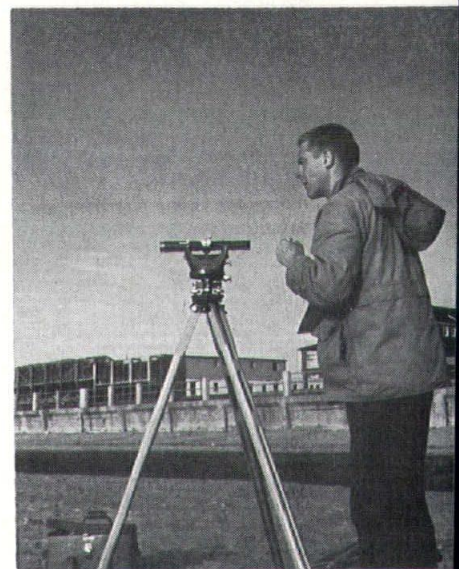
The internal structure of cells of marine animals and plants, and the cells of micro-organisms which cause fish and oyster diseases are magnified many thousands of times by the VIMS electron microscope shown being operated by Dr. Frank Perkins.



Dr. Edwin B. Joseph, now a VIMS Assistant Director, is shown preserving a sample of fish eggs and larvae taken along the continental shelf in 1960 during a research project to determine spawning areas of certain important Chesapeake Bay fishes.



Dr. M. N. Nichols, VIMS Geological Oceanographer at left, and Allan Hartwell, summer NSF Undergraduate participant, extract core sample from Rappahannock River marshland.



Dr. Wyman Harrison, Head of Physical Chemical and Geological Oceanography VIMS is shown using a surveyor's transit set up research stations at Virginia Beach during beach erosion studies there in 1960.



The effects of water milfoil on swimming, boating, diving and other aquatic recreation can be startling, as shown by this diver.

also found that the beach was neither high nor wide enough to guard against direct attacks by waves associated with massive disturbances such as the Ash Wednesday storm.

Although Dr. Harrison left VIMS in 1964, both he and others at the Institute continued their interest in beach erosion problems. With Harrison's return to the staff this year as head of the Department of Physical, Chemical and Geological Oceanography, VIMS has begun a new round of studies on the barrier islands of Eastern Shore. He and his colleagues are also developing mathematical models for the prediction of rates, magnitude, and direction of inlet migration and shoreline change along the entire Virginia coast.

WATER MILFOIL

Residents of lower Machodoc Creek on the Virginia side of the Potomac River complained to VIMS scientists in the spring of 1959 about unusually dense growths of an aquatic weed choking several hundred acres of the creek with impenetrable masses. Dexter Haven, now head of the Department of Applied Biology at VIMS, was dispatched to observe the problem.

Haven could find no one who remembered seeing the plant in Machodoc Creek prior to 1956 indicating that the vegetation had invaded the area amazingly fast in a brief period of three years. Since this weed destroyed the recreational and fishing utility of the waters, laboratories from both Maryland and Virginia, and the U.S. Fish and Wildlife Laboratory at Patuxent, Maryland, joined forces in a broad survey to determine the extent to which it had spread and to seek a cure. It was found in protected areas throughout the entire upper Bay from the Potomac north, growing in brackish water up to 15 parts salt per thousand and at depths up to ten feet.

Haven organized a cooperative project to determine a means of controlling milfoil and preventing its spread to other areas of the Chesapeake Bay system. A chemical control was developed and used to eliminate the weed from several critical streams; however, wide use could not be encouraged due to food and drug restrictions. The search for a suitable and widely useable control continues. In



Scene at Virginia Beach following the Ash Wednesday Storm in 1962. Sand was pumped from Lake Rudee to replenish the beach after this storm.

the meantime public education of the seriousness of this pestweed is continuing so that its distribution into other areas may be avoided.

SALTWATER INTRUSION

During the summers of 1964 and 1965, after prolonged dry weather, VIMS scientists noted that the normal flow of fresh water from upland areas was dwindling severely and that salt water was intruding further and further upstream in Chesapeake Bay and its tributaries. This was especially acute in the James River, which empties into the lower bay where concentration of salt water from the sea is highest.

Fear developed that if the salt wedge continued to move upstream, it

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could find its way into industrial and municipal water supply intakes as far up river as Hopewell. Serious damage could result to both factory processes and municipal fresh water supplies.

City officials and industrialists were notified and VIMS chemists continued to sample water along the river's extremity to monitor saltwater intrusion so that fresh water users could be warned immediately upon its arrival and avoid damage. Fortunately, nature solved the problem by resuming more normal rainfall, but the problem of salt water encroachment will always be with Virginia, necessitating watchfulness and study.

A MODEL IS BORN

Nearly fifteen years ago municipal and industrial interests using the James River urged deepening the 25-foot channel from Hampton Roads to Richmond to 35 feet so larger vessels could navigate upstream. Others felt that a deeper channel through the upper tidal James would open new avenues for industrial development in that area.

Few objections were voiced at first, but as time passed, fear arose that this navigation project might have serious effects on the multi-million dollar oyster industry. Oystermen protested that valuable seed oyster beds near the James River Bridge might be seriously damaged or even destroyed. Scientists predicted that physical changes in the estuarine portion of the river would surely result. The Virginia General Assembly wisely delayed approval of



Norfolk portion of the James River hydraulic model.

the project until a scientific study could determine the various physical and biological effects that would result from channel modification.

As part of this study, scientists from VIMS recommended building a physical scale model of the tidal James to test the proposed change under conditions resembling those in nature. The model would enable them to accurately pinpoint natural conditions before and after deepening.

Funds became available for re-

search on the problem in 1964 when the General Assembly appropriated \$300,000 to the Commission of Fisheries (now the Virginia Marine Resources Commission) in Newport News. This included construction of a suitable hydraulic model.

The U.S. Army Corps of Engineers was selected to build and operate the James River Model. It possessed the necessary skill and facilities; furthermore, the Corps contributed about \$100,000 toward building costs. The



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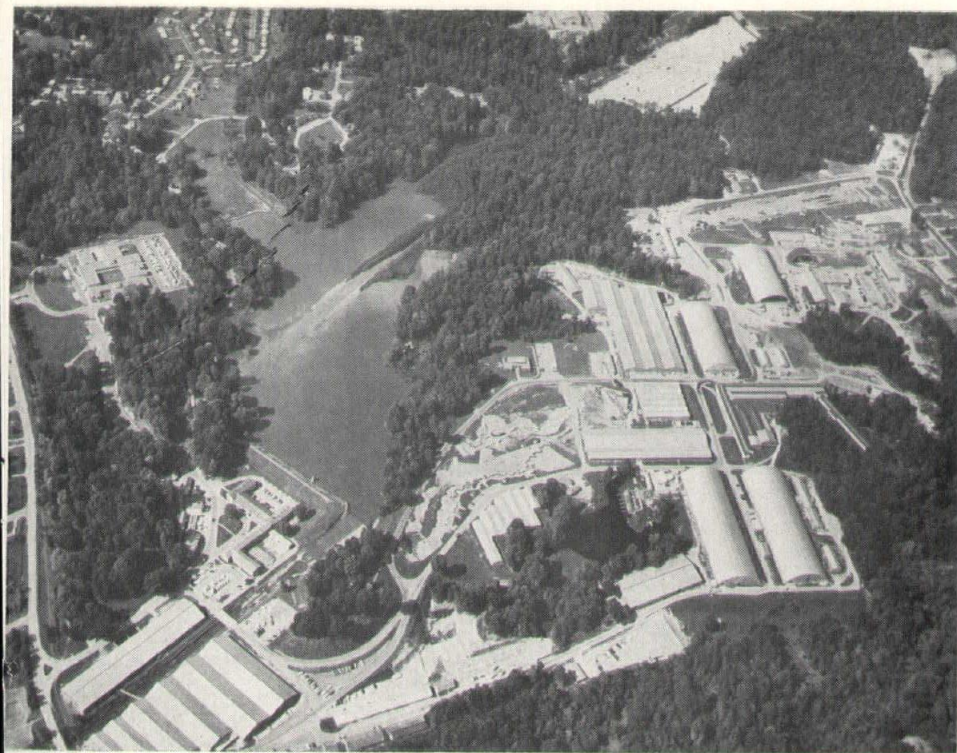
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An aerial view of the Waterways Experiment Station of the U.S. Army Corps of Engineers where many hydraulic models, including the James River Model, are constructed and operated.

model was built at the Waterways Experiment Station (WES) in Vicksburg, where a dozen other hydraulic models are also housed. (WES is the principal research and engineering study facility of the Corps). VIMS provided bathymetric information (bottom contours), and oceanographic data (salinity distribution, current speed and direction, etc.) for model construction and verification.

The Commission selected VIMS to conduct the necessary research for determining the effect of channel deepening on the physical features and on oyster production in James River. The Institute then initiated a multi-disciplinary research project (labeled Operation James River) that provided information concerning the physical and chemical processes in the James and the effects of these phenomena on the biological activities occurring in the river's estuarine portion. In 1965 and 1966 reports were submitted to the Governor and General Assembly of Virginia stating that tests of a model, laboratory and field had revealed channel modification would not seriously affect the oyster industry. The navigation project was approved by the state.

After the Corps of Engineers fulfilled its contract with Virginia for the channel study and completed certain studies of its own, the model could have been dismantled. Reg-

ulations governing WES allow it to destroy models when there is no longer any need for them. Virginia, however, acted quickly and requested that the model be kept in operating condition for future uses. The Commonwealth had invested about \$400,000 in developing this experimental facility and carrying out other research, and VIMS scientists urged officials to retain it for continued use in developing the important James River Basin and by the communities and industries located along the river.

There are numerous other potential uses of the model, and new ideas for its use are constantly emerging from research and engineering developments.

SEAFOOD PROBLEMS

Since the Institute was founded in 1940, major research efforts have been devoted to solution of problems relating to Virginia's valuable seafood interests. There has been a constant demand to solve immediate problems, and scientists here have set about doing so. Today, VIMS has grown to a size and level of sophistication, and in knowledge and experience, at which its scientists attempt to anticipate the impending problems and seek out solutions before serious effects occur. A considerable fund of knowledge regarding fluctuations in the populations of important species, diseases, changes

in migration patterns due to either natural phenomena or man-made activities, and other fishery-related changes can now be drawn upon to advise government leaders and resource management agencies, as well as the watermen and seafood dealers who are directly affected.

INDUSTRIAL FISH PROGRAM

VIMS Ichthyologists had long been interested in a research project to determine stocks of fish along the continental shelf off the Virginia coast that might be used to develop a new industrial fishery here. These would be species not being utilized in the American fisheries, but which were thought might exist in quantity. However, the Institute had neither funds nor an adequate research vessel for the extensive ocean research program. The 88th Congress passed the Commercial Fisheries Research and Development Act, making funds for this type of research available to qualified institutions through Federal contracts in 1965. The VIMS project was submitted through the Virginia Marine Resources Commission and was approved for funding under this Act.

Dr. Jackson Davis, now head of the VIMS Ichthyology Department, was assigned to head the project, and an ocean trawler, the SEA BREEZE out of Hampton, was chartered for the field work. Fish were collected in each season from 50 to 100 stations dotting a 10,000 square mile stretch of the continental shelf off Virginia, north to Cape May, New Jersey and south to Cape Hatteras, North Carolina. Sampling continued during all four seasons of 1966 and 1967.

A determination of species which were available throughout the year and those which were available only seasonally was made in 1966. In 1967 the scientists attempted to learn the abundance of the various kinds of fish by means of extensive sampling with a large trawl.

Since completion of the two field research phases, project data has been computerized and analyzed. Abundance approximations were compiled in early 1968, and a more detailed analysis is still in progress.

Research on the fish resources of the continental shelf is being extended to include the pelagic fishes, those that swim well above the bottom. This new phase is in cooperation with the U.S. Bureau of Commercial Fisheries and Virginia menhaden industries. Whereas the Industrial Fish Project was designed to sample species that could be caught with relatively inex-

pensive bottom nets currently being used by American trawlers, the new work leans toward learning techniques that can be used in catching schools of pelagic ocean fishes.

The goal of both projects is to find feasible means toward a more thorough utilization of oceanic stocks and to broaden the base of the fisheries and fishery industries. Fish flour and fish meal is now being examined internationally, and is considered an excellent potential source of meat protein for human consumption. At this writing a fleet of more than 100 Soviet Block vessels is fishing off the Virginia coast. If the United States does not use these resources, others evidently will.

OYSTER DISEASES

Dr. Willis G. Hewatt of Texas Christian University, who was teaching a summer course at VIMS in 1950, placed several trays of oysters in the York River. He had recently been involved in oyster disease research in the Gulf of Mexico and was interested in learning whether such diseases existed in Virginia oyster beds. A number of the tray oysters died during the summer with deaths attributed to

Dermocystidium marinum (Dermo), a serious disease of oysters.

Dr. Jay D. Andrews, now head of the VIMS Department of Malacology, joined Hewatt in the Dermo studies in 1961, and most of his research has been in disease studies since. VIMS was able to recommend oyster-growing practices that minimize damage once an understanding of the disease organism was reached. However, a new disease, MSX (*Minchinia nelsoni*), invaded Virginia oyster beds in 1959 and its effects on the oyster industry have been more serious.

MSX first occurred in Delaware Bay, causing a limited epidemic in 1957, and a severe one in 1958. VIMS scientists warned Virginia oystermen to expect the disease to appear here. They were cautioned to watch their oyster beds carefully and sell oysters as soon as market size was reached. Mobjack Bay oyster beds were the first attacked by MSX, with serious losses occurring in 1959. It spread over the entire lower Chesapeake Bay in 1960 when large quantities of oysters were killed by MSX.

Considerable information compiled by VIMS scientists in studies of MSX since its arrival has been passed along to oyster growers. Details regarding

salinity tolerances and other environmental limits of the disease organism, and information on the timing, occurrence and expected effects have been useful to them. It was found that the disease did not affect oysters in low salinity waters, and oystermen continued to plant those areas. VIMS encouraged heavier planting in these areas. Andrews learned to predict time and level of infections and mortalities enabling VIMS to urge the marketing of oysters grown in marginal areas as soon as they reached market size and prior to summer epidemics.

The scientists also found with laboratory-reared seed that oysters exposed to MSX from time of spawning and fertilization developed acquired immunities that permitted planting in heavily infested waters with relatively low mortalities. Subsequent trial plantings in Mobjack Bay, one by the Virginia Marine Resources Commission and another by an independent oysterman, have been monitored by VIMS personnel who found only 20% mortalities annually due to all causes including predators.

MSX is not expected to disappear from the Bay, but VIMS scientists feel they are learning how the industry might live with it. They are continuing their studies with emphasis on de-

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BLUE CRAB RESEARCH

The blue crab fishery ranks among the most important seafood industries of Chesapeake Bay. Better than 60% of the catch is landed by Virginia fishermen. One-fourth of the Virginia catch comes from its winter dredge fishery in the lower Chesapeake Bay area. However, this portion of the crab fishery has been a sore subject among Maryland seafood interests, especially during those years when the crab catch declines. Some Marylanders feel that since a larger portion of the winter catch is adult females that have bred and will spawn the following spring, the spawn may be reduced below a critical number causing a decline in blue crab populations. The 1968 summer crab catch dropped sharply in Maryland and Virginia giving new impetus to Marylanders' feelings. This followed record-year catches in 1965, 1966, and 1967; the all-time record catch of over 94,000,000 pounds of hard crabs was made in the Bay during 1966.

W. A. Van Engel, head of the Department of Crustaceology and a member of the research staff since 1946, specializes in blue crab research at VIMS. Over the years he has developed a reliable technique for predicting significant increases or declines in Chesapeake Bay blue crab populations often a year or more in advance of the changes. The 1966 abundance and 1968 decline were predicted by his technique. His work and experience has been instrumental in forming the current VIMS position that blue crab fluctuations appear more likely caused by natural phenomena, such as variation in temperature, salinity, food, light, predators and diseases than by fishing effort. The scientists do not feel that new restrictions imposed upon the winter dredging of crabs would materially affect summer crab populations.

Research at VIMS and elsewhere in the life history, migrations and population dynamics of many important marine species has indicated that



Licensed tongers using hand tongs, harvest both seed and market oysters from public rocks.

minor changes in an animal's natural environment can drastically affect its survival and therefore its population within the system. In their research, VIMS scientists acknowledge the effects of man's activities, including commercial fishing intensity, as well as those of nature in their attempts to understand varying trends in abundances as well as other problems of specific species.

SEWAGE OUTFALL LOCATIONS

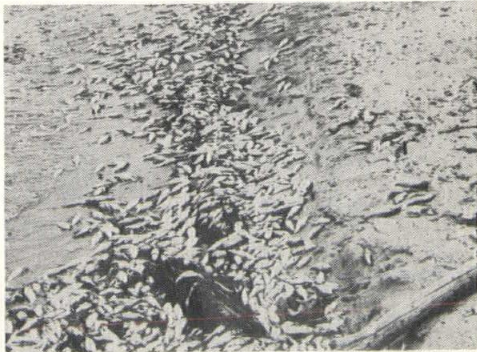
Several years ago VIMS was engaged by the Hampton Roads Sanitation District Commission to conduct studies in order to determine the most suitable location for two proposed new municipal sewage treatment outfalls. The Commission's final selections for the James River Outfall on Warwick River and the Chesapeake-Elizabeth Outfall near Little Creek, were made after deliberations with VIMS staff members and independent consulting engineers. The criterion for site selection was to locate the outfall where minimal damage would result to the environment and other intended uses of the water.

FISHKILLS

Each year nearly a million fish are killed in the upper tidal James and Appomatox Rivers and other areas

due to degradation of the environment. This results from one or more of three factors: introduction of raw or partially treated domestic wastes; industrial discharges; or over-enrichment caused by the introduction of phosphorous and nitrogen from man and industry. While fishkills occur elsewhere in Virginia's marine system due to these causes, the annual James kill has become predictable.

Fishkill scene along Jamestown Island in summer of 1965.



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The first two causes are correctable, and steps are being taken to eliminate the sources. The third (over-enrichment) is requiring continued study both here and in other coastal estuaries. Over-enrichment results when too much nutrient material is introduced into a stream, causing dense growths of aquatic plants, which soon die *en masse*, fouling the water. Fish-kills beginning in over-enriched water often spread downstream. Disease epidemics sometimes cause massive kills of fish in over-enriched streams, but the relationship between fish disease and over-enrichment has not been clearly established.

SHIP INTAKE FOULING

A classic problem with wooden ships of old was shipworms which often riddled vessel bottoms with pencil-size holes. Modern steel-hull vessels are free of this problem, but not without others. Corrosion, solved through use of anticorrosive paints, is one. Paints are also used to keep marine organisms from fouling ship bottoms.

VIMS has been called upon in recent years to assist ship operations encountering a new problem. Mechanical obstructions in salt water systems within the vessels were occurring due to the intake of marine organisms with the raw water supply. This occurred most frequently in harbors or shallow bays where organisms, or colonies of them are brought into suspension by wave action. Now that the problem is understood, engineers are designing

devices that will block out the intake organisms.

ENGINEERING PROJECTS

When channels are dredged in Virginia's tidal waters, the U.S. Army Corps of Engineers frequently calls upon VIMS to conduct studies that assist with several aspects. Research is used to minimize the damage to marine life within the channel and in the site selected for depositing the dredged spoil material.

The James River Model is being used by both the Corps and VIMS to determine suitable sites for dredge spoil disposal. Studies in the model help locate channels where erosion or modification by natural currents will be minimized.

These are some of the problems faced and acted upon by oceanographers at the Virginia Institute of Marine Science. They are problems that have been publicized through the news media. They do not represent the full range of VIMS activity; in fact, they barely touch upon it.

VIMS FUNCTIONS AND PROGRAMS

The functions and programs of the Virginia Institute of Marine Science are included in three categories: research (discussed above), advice and education. It has no law enforcement powers, nor does it have direct marine resource management responsibilities. These are vested in other state, interstate and federal agencies.

ADVISORY AND CONSULTING SERVICES

VIMS is constantly called upon for advice for numerous intrastate and interstate groups and individuals. Its representatives regularly appear as advisors and consultants at meetings of the Marine Resources Commission and the Potomac River Fisheries Commission. The Governor and General Assembly call upon its scientists for advice or for research designed to answer specific questions. Other intrastate groups that seek advice include the commercial fishing industry, the sport fishing industry, representatives of the recreation and tourist industry,

manufacturers, river basin development groups, local planning boards, various Tidewater communities and individuals, and defense installation officials.

Interstate inquiries come from various national groups concerned with the proper use of marine resources, and from defense agencies, the U.S. Army Corps of Engineers and from numerous other Federal agencies dealing with the marine resources.

VIMS scientific publications, data reports and other special scientific reports are distributed throughout the country to other research institutions, college and university libraries and to numerous organizations and individuals requesting them. It also joins in the international exchange of scientific information.

EDUCATION

Although VIMS is principally a research institution, it also serves Virginia in the field of education. Under affiliate arrangements it is the School of Marine Science of the College of William and Mary, and the Department of Marine Science for the University of Virginia. Further, it assists Virginia schools and colleges with special education programs. Numerous extension services are made available to the general public.

ACADEMIC ACTIVITIES

Academic programs offered at VIMS through affiliation with William and Mary and the University are graduate programs, although advanced undergraduates are sometimes admitted to courses, especially in summer. About thirty members of the research staff serve in the academic programs as members of one or both faculties.

Prospective students apply for either program through regular channels of the parent academic institution. Once approved, they may spend the duration of the program in class or thesis research work on the Gloucester Point campus. Dormitory and study space, plus classrooms and research laboratories and equipment is provided as required.

A student may study for the M.A. or Ph.D. degree in either program. Specialization is available in Biological Oceanography, General Oceanography or Fisheries Oceanography. A majority of students currently enrolled receive financial support through fellowships or by working in regular research operations at VIMS as Graduate Research Assistants.

The programs have grown markedly in recent years. A total of 49 student

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VIMS cooperated with the Norfolk School Board several years ago to co-sponsor a summer training program in marine science for qualified high school students. The program received financial assistance from the National Science Foundation. Here they are shown collecting with a seine at Willoughby Spit.

are presently enrolled, 38 in the College of William and Mary program and 11 in the University program. M.A. candidates total 29 and there are 20 Ph.D. students. The academic programs have developed a combined total of 47 alumni, 32 of whom have received degrees since 1960.

Other special educational programs that reach a large segment of Virginia's population are conducted by VIMS personnel. These include extension course offerings, summer research participation for college teachers and undergraduates, a summer aide program, summer cooperative high school training programs, field trip facilities for Virginia colleges, universities, and secondary school classes, and other cooperative undergraduate and graduate programs.

EXTENSION SERVICES

The VIMS Department of Information and Education releases information regarding oceanography and problems encountered with the Commonwealth's marine resources through public news media. More detailed information is prepared and distributed to resource users and resource planning groups through preparation of special scientific reports, special information bulletins and pamphlets, data reports, applied marine science and ocean engineering reports, lectures, workshops and special educational television programs. Educational pamphlets are prepared for distribution among schools and the general public.

THE VIMS RESEARCH PROGRAM

The research organization of VIMS is separated into two divisions: the Division of Biological and Physical Oceanography and the Division of Applied Science and Oceanic Engineering, each headed by an assistant director.

There are two categories of research effort: Applied Research and Basic Research. Under the former are listed pollution ecology, finfisheries, shellfisheries, engineering resource development demonstration unit, and short-term and limited technical problems research. Under Basic Research falls vertebrate biology, invertebrate biology, basic ecology, productivity, planktology, microbiology, macro- and micro-morphology, parasitology, pathology, physiology, taxonomy, chemical oceanography, physical oceanography, geological oceanography, and meteorological oceanography. Whereas, at least in theory, Applied Research programs are designed for short-range answers to resource problems and Basic Research connotes a long-range search for information, in practice there are usually considerations for both the short- and long-range aspects of every research endeavor. Both approaches are vitally necessary in the principal VIMS role of providing a reliable understanding of the marine resources of Virginia.

VIRGINIA'S OCEANOGRAPHIC LAW

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Governor and General Assembly under Chapter 9, Title 28 of the Code of Virginia, sometimes called the "Oceanographic Law." Those duties are listed as follows:

- (a) to conduct studies and investigations of all phases of the seafood and commercial fishing and sport fishing industries;
- (b) to consider means by which fisheries resources may be conserved, developed and replenished and to advise the Marine Resources Commission and other agencies and private groups on these matters;
- (c) to conduct studies and investigations of problems pertaining to other segments of the maritime economy;
- (d) to conduct studies and investigations of marine pollution in cooperation with the State Water Control Board and the Department of Health and make the resulting data and possible corrective recommendations available to the appropriate agencies;
- (e) to conduct hydrographic and biological studies of the Chesapeake Bay and the tributaries thereof and all the tidal waters of the Commonwealth and the contiguous waters of the Atlantic Ocean;
- (f) to engage in research in the marine sciences and, with proper affiliation with one or more accredited institutions of higher learning, provide education therein;
- (g) to make such special studies and investigations concerning the forego-

ing as it may be requested to do by the Governor.

The above studies shall include consideration of the seafood and other marine resources including the waters, bottoms, shorelines, tidal wetlands, beaches and all phenomena and problems related to marine waters and the means by which these marine resources might be conserved, developed and replenished.

Dating to 1940, this charter wisely required basic and applied research, technological and engineering developments and service to the principal users, managers and developers of the state's vast marine resources. It also provides for education in all relevant fields of oceanography and technology. In recent years, mechanisms have been developed to make the laboratories, equipment, ships and other resources of the Institute available to interested scientists and students in other institutions. Conversely, this arrangement provides for encouraging others to work on the marine environment and problems of the Commonwealth.

FACILITIES, FINANCES AND STAFF

The principal facility of the Institute is located at Gloucester Point, just across the York River from Yorktown. There are four relatively large laboratory and office buildings of masonry construction, plus half a dozen smaller buildings used as laboratories, storage houses or maintenance shops. A second facility is maintained at

Wachapreague on the seaside of Eastern Shore, and it has a permanent staff of four with overnight accommodations for scientists and students visiting the area on research assignments and field trips. The James River Model, located at Vicksburg and discussed earlier in this article, is an additional facility used by both scientists and students at VIMS. Also, a number of research stations, moorings and platforms are maintained by VIMS throughout the Virginia marine system.

The VIMS research fleet includes RV PATHFINDER, a 55 ft. ocean-going vessel of trawl design, the 80 ft. RV LANGLEY, a former ferry converted into a shallow water floating laboratory, and a number of sea skiffs and small outboard skiffs. Larger vessels for the Institute's extensive research endeavors along the continental shelf are often chartered.

Through VIMS, the General Assembly has made Virginia a leader among states supplying their own funds for marine research. Current appropriations total slightly more than one million dollars annually, as contrasted with less than half a million per year in the 1960-62 biennium. Various grants and contracts, mostly with Federal agencies, add approximately half a million dollars to yearly expenditures.

The total VIMS regular staff of about 180 employees includes 18 scientists at the Ph.D. level and 17 at the master level of academic training. A 16-member associate staff includes 13 scientists who are degreed at the doctorate level, and two at the master's. The staff is regularly augmented during summer months by an additional 40-50 persons, including summer aides, summer students, visiting scientists and several college teachers and undergraduate students engaged in independent research under cooperative NSF-VIMS training programs.

Perhaps the VIMS programs are best expressed in recent discussion and writings of its director, Dr. William J. Hargis, Jr. He is neither a punch-puller nor a word-mincer when it comes to deliberations regarding the future of Chesapeake Bay and other Virginia coastal waters. "As goes the Bay, so goes Virginia's valuable marine resources," he says. "We have learned that more than 7 billion dollars change hands each year in the 3 counties and cities of Maritime Tidewater Virginia, due to the marine environment, its resources and attractions."

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The son of a Tangier Island fisherman's daughter and a Russell County pharmacist, Hargis has held a life-long affection for the Bay, its intrinsic values and its usefulness to Virginians.

"Twice daily the ocean tide rises and falls in the 13 thousand square miles of the Virginian Sea and Chesapeake Bay," he wrote in an article published in VIRGINIA FORWARD magazine in February of 1968.

"Along the 4,000 miles of shoreline, salt and fresh waters of Tide-water alternately cover and uncover rich shallows and marshlands—mixing fertility of soil and sea. Wildfowl, marsh animals, fish and shellfish are spawned in, sheltered or nourished by the enriched broth of the sea. Mineral deposits, fashioned by the ages, are hidden by the inconstant face of the ocean. By surf, beaches are built; under its turbulent roar, coasts are destroyed and highlands fall. Into the waters of the sea wash the soil of mis-used land and others of the thousand wastes of man.

"Houses, cities and factories rise along the shore. A newly christened ship slides silently down the ways. Upon the ocean a ship moves majestically, commerce or pleasure bent. Silent submarines angle slowly to stations below the sea's blue deck. Fishermen bring from the shallows of the Bay an abundant but varying harvest of crabs, clams, oysters and fish. From deeper shelf waters of the Virginian Sea, draggers scoop fish and scallops and other creatures. A sail shimmers over blue-green waters, while on shore recreationists and householders are refreshed or solaced by the sea.

"Beaches and marsh, highlands and deeps, bottoms and shallows, fish and owl, sea and sky all are of great aesthetic and economic value to the Commonwealth."

Hargis' concern for the Bay and its tributaries is not restricted to the Virginia portion of it. "Although Virginia contains what must be considered the most valuable portion in terms of quantity, numbers of harbors, greater numbers of seafood harvest areas, accessibility to the ocean, and other factors, the lower Bay also appears to be the area of more resource-use problems," he says.

"We must, therefore, consider all uses of the Bay's resources in order to anticipate its future role in Virginia's economic and social development. The water that constantly flows through its mouth between Cape Charles and Cape Henry is directly

affected by man's activity throughout the Chesapeake drainage basin. This involves not only the states of Virginia and Maryland, but also those of Pennsylvania and New York through which drains the Bay's major freshwater contributor—the Susquehanna River. Water may one day be impounded in its headwaters, pumped into New York City and released in domestic wastes there through the Hudson River, reducing fresh water input into the Chesapeake. Any sizable reduction of fresh water drainage alters the delicate balance of estuarine circulation in the Bay. The introduction of municipal and industrial wastes from growing metropolitan centers in those states materially affects water quality in the lower Bay. From this we may conclude that there is a 'total-use factor' involved in our exploitation of the Bay's resources, and it includes all uses of it and all parties who use it, not just Virginians."

Hargis terms this use factor of an estuary, embayment or stream as its "human carrying capacity."

"The human carrying capacity of an estuary, in this case the Chesapeake

Bay system, is linked to three factors," says Hargis. "The first is the use by present and future residents of the Bay area, and users elsewhere, since the Bay is a national resource. The second is the water quality necessary to permit these uses, and the third is the extent of man's contaminating activities that can be allowed before water quality drops below the established quality minimums.

"We must approach the time when our oceanographers along with demographers, economists, conservationists, planners and managers can accurately pin-point the Bay's human carrying capacity. This effort will be greatly accelerated once the Chesapeake Bay Hydraulic Model is completed, an approved project of the Federal Government in cooperation with the Maryland and Virginia Governments. But before the carrying capacity can be determined, the people must decide upon the water quality they wish maintained.

"Only when the carrying capacity is established, can we begin to estimate the allowable limits of industries, people, engineering projects, shipping ter-

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minals, channels, bridges and all other activities of man affecting water quality within the Bay drainage system. Moreover, Maryland and Virginia must cooperate with other states involved in Chesapeake Bay matters to assure its survival as a useful, beautiful marine resource system."

THE FUTURE

The numerous non-military research and development projects conducted by VIMS, coupled with other activities in the marine sciences and

in public and private management of marine resources, have begun to provide a research, development and management capability which will be useful as Virginians come to grips with future problems. As a result, Virginia is in the best position ever to advise, secure and provide services on the practical problems resulting from multiple resource uses. In developing the various oceanographic capabilities at VIMS, emphasis has been placed on making the results of research available and useful to the

state, its industries and people. Obviously, people and industry put greatest demands on marine resources. Therefore, state-supported research should serve both science and the resource users and management.

In the future, Virginia must be able to 1) resolve conflicting use problems; 2) prevent degradation and destruction of the marine environment; 3) develop the ability to secure more food from the sea by controlled cropping of naturally produced or "wild" populations and by mariculture or "marine farming" — controlled production of marine organisms—first, for molluscs and perhaps algae, and later for crustaceans and finfish; 4) increase sport-fishing yields; 5) use converted seawater to drink, process and cool; 6) increase other recreational areas and uses and restore the quality of the marine environment; 7) wisely set aside those areas of marsh, beach and water which must be preserved for all time; and 8) prevent or reduce destruction of life and property.

These objectives are clearly within the guidelines established by the General Assembly and Virginia and by the President's Advisory Committee and the National Academy of Science's Committee on Oceanography, and in the recent report of the Commission on Marine Science, Engineering and Resources. Existing programs and most of those planned for Virginia will contribute markedly to the further social and economic development of the Commonwealth as well as to increasing fundamental knowledge of the sea.

Oceanography and its service to man will undoubtedly accelerate during the next decade or more at an even greater pace than during the past several years because an orderly development of ocean resources is vital to the future of the Nation and especially to Virginia. As we approach new levels of population and industrial growth in Virginia and the needs for more food, water and minerals from the sea, its shores and floor, and for wise replacement of factory, farm, home and city, it is clear that further development of oceanography, marine technology and engineering by the Commonwealth and by the Federal government and industry warranted and necessary.

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(Continued from page 5)

I will confess that I know little about Mr. Unger's university. My impression was that its areas of specialty were scientific, and that recently on this basis considerable emphasis had been given to VPI's liberal arts program. If this impression is correct, any student would receive training in scientific methods—the correlation of provable data from which could be derived demonstrable premises—and that with this scientific approach he would enter a liberal arts program with an inquiring mind. Stressing that I know nothing about any courses at VPI, I do know that survey courses in history can be deadly anywhere and exert the opposite effect of arousing inquiry. But if any course in American History were taught at VPI with an emphasis (say, for one semester) on the part of Virginia's history within the nation's, it can be stated with reasonable certainty that any student holding Mr. Unger's concepts of the United States would be *jolted* into inquiry. Virginia's history would, in fact, be so antithetical to the mythical views held by Mr. Unger that he would be jolted into dissent, that healthiest form of inquiry.

It is of particular significance that the mythology relating to the Confederacy, as adumbrated by Mr. Unger, be subjected to critical examination in these times when the struggle for some working adjustment between the two races has reached a stage of such confusion and loss of certainties. For just about 100 years (1865-1965) the non-Southern parts of the United States posited all their evangelism about the racial problems on the comfortable proposition that racial discrimination was restricted to THE South, and as long as the neo-abolitionists brought the light to Alabama and Mississippi they were doing all necessary to correct the evils of white supremacy. Beginning about with the Watts riots, successive riots in Northern cities shook the complacency about the *national* advance in racial relationships accomplished by crusades in and finger-pointing at the benighted South. Then, the rise of black militants, with their scornful repudiation of the white "liberals," made painfully clear the reality that the whites' evangelical indignation about THE South did not cause the colored populations of the North to look away—as it did the whites—from what was happening in their own neighborhoods.

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own claim) of the most progressive nation on the globe (look at the G.N.P.) caught in such a massive self-delusion that they have been unable to make any adjustment to the reality their Negro populations have forced upon them? Undeniably one basis of their self-delusion is the 100 year existence of the myth that the North waged a crusade to "free the slaves" while the South (to quote Mr. Unger) "fought to maintain his (the Negro's) position as a sub-human." The acceptance of this myth implied a moral superiority in which grew a whole mythology about the place of the Negro in the morally superior region. Where lessons from the past would be useful would be in a re-education which explained that the moral superiority had been based on a mythical premise, not on provable data.

While Virginia could scarcely hope at this date to intrude on the educational system of New Jersey (although one might think that the events in Newark and Elizabeth, and currently happening among their neighbors in Brooklyn, might raise some doubts), we could certainly begin in our own schools and colleges on the re-education of those out-of-state students who select our institutions. Considering the bewilderment and lack of programs in the whole nation, Mr. Unger himself seems an "anachronism" in belaboring an event of a century ago in a time when even the most anti-Southern radicals have found their old formulas to be irrelevant.

As for the charge that the Confederate flag belongs as a symbol alongside the Swastika, this sounds like the Rebel baiting in Washington during the late nineteenth century, when Northern politicians made their immeasurable contribution to stigmatizing the Confederacy. If Mr. Unger wishes to liken the economic institution of slavery to the Nazi persecution of Jews, he would have to start on the premise that the

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90% of Southerners who owned no slaves were primarily motivated to fight to protect the property of 10% of the population. That is in the whole South. In Virginia, he could not maintain even this shaky premise.

Efforts to abolish or curtail the importation of slaves had started in Virginia in the early 18th century, when it was a British colony; efforts at emancipation started early in the 19th century, and a good argument can be (and has been) made that this movement was checked after 1832 by the irresponsible agitations and venomous attacks of the Northern abolitionists. In 1861, when the use of slavery had been on the decline for years, more freed Negroes lived in Virginia and Maryland than in all the rest of the United States.

In 1861, when the states of the Lower South seceded from the Union of States, Virginia—with North Carolina, Tennessee and Arkansas—did not secede. A Secession Convention voted two to one against joining the states of the Lower South in a new Confederation of States, and a commission from Virginia was in Washington with the purpose of arranging a peaceable settlement between the U.S. and the seceded states when Lincoln called on Virginia for troops to be used in the forcible return of the seceded states to the Union. As Virginia's governor wired President Lincoln, "You have chosen to inaugurate civil war."

Lincoln had made this choice, with a most naive expectation of a quick suppression of the dissidents by force of arms. Virginia's government and troops in the Confederate armies were filled with men who had voted against secession and who disbelieved in the institution of slavery. They were brought into the Confederacy first in a protest against armed coercion and then by defense of their land. If the Swastika should symbolize their defense, then it should also symbolize the United States, because slavery remained legal in the United States during the whole course of the war.

It could not be, could it, that Mr. Tinger believed the Emancipation Proclamation was an humanitarian stroke designed to free all the slaves? By Lincoln's own words, it was a military expedience aimed precisely at and only at those sections of the states in rebellion which refused to surrender. The English papers were unanimous in criticizing the Proclamation as a punitive, not humanitarian, measure.

It has been my experience that Virginia's reluctant entry into the Con-

federacy is little known, and even less known are the circumstances under which Lincoln's handling of the secession of a few states brought in Virginia and those other states who caused Lincoln's expected suppression to be blown up into a gigantic civil war. As the Swastika is also associated with the Big Lie so effectively used by the Nazis, it might be suggested that the obligatory history course point out the Big Lie by which Reconstruction politicians fed the delusions of their constituents by stigmatizing a defeated people—delusions which grew out of Lincoln's demonstrable contradictions about why the war was being fought.

In these troubled times, of confused gropings, we would certainly be helped in the solution of the problems by some understanding of the forces which produced the present. Fundamental in this understanding is the acceptance that no region of the nation has a monopoly on social justice and moral superiority.

The Northern troops who invaded and laid waste the Southern land, leaving poverty as the heritage for the next two generations, could not have cared less about the Negro, slave or free. The records of the treatment of Negroes by the conquerors are open to anybody. Their treatment of "Sambo," as they called the colored men, was not any different from the treatment of Negroes in Northern cities today.

If the Confederate flag can be a "catalyst for bigotry" at VPI, then an obligatory course in American history is badly needed. For if any understanding

is to illuminate the currently complicated problems in racial adjustment, it will certainly begin with an understanding of the forces set in motion by the attitude of all the white people of the United States; it is only turning back the clock to the days of anti-Southern bigotry in the Reconstruction and post-Reconstruction eras to liken to the Swastika the flag under which Virginians fought and died in defense of their land. Under what flag did the self-righteous, self-deluded liberal talkers of the North bring about the Negro riots and the rise of the black militants in their own cities?

Bigotry doesn't need any flag. Nor does the present apparently insoluble conflict need hackneyed accusations at the symbol of a people long dead. In the minds of Virginians there is nothing "anachronistic" about the values represented by the Confederate flag: those values hold eternal validity. And it does seem that any denigrator of the values symbolized by the flag is obligated to discover first what the values were.

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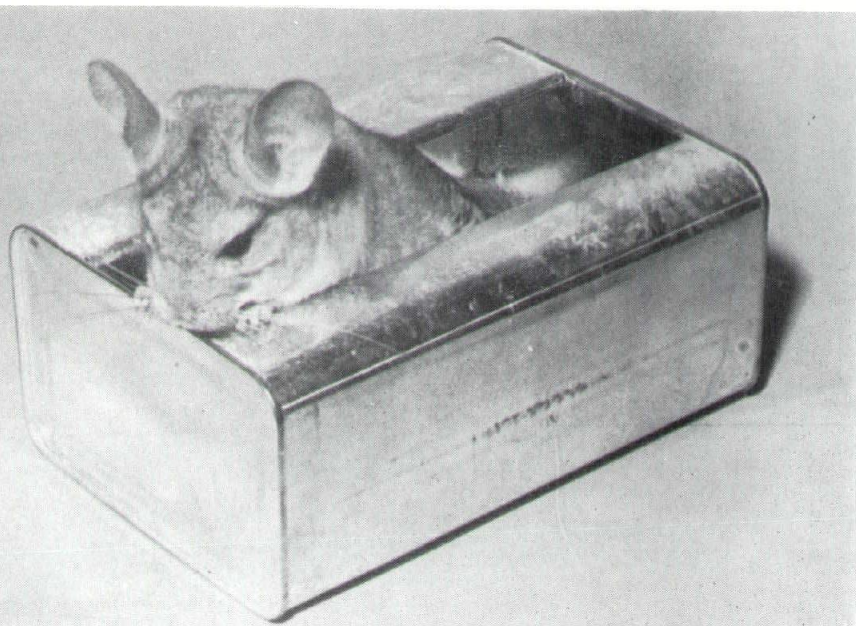
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