MISSISSIPPI GEOGRAPHY NEWS LETTER

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DELTA STATE COLLEGE MISSISSIPPI STATE UNIVERSITY

MISSISSIPPI SOUTHERN COLLEGE

Vol. 5, No. 2

THE DELTA

My country is the Mississippi Delta, the river country. It lies flat, like a badly drawn half oval, with Memphis at its northern and Vicksburg at its southern tip. Its western boundary is the Mississippi River, which coils and returns on itself in great loops and crescents, though from the map you would think it ran in a straight line north and south.....Across this wide flat alluvial stretch..... north and south it measures one hundred and ninety-six miles, east and west at the widest point fifty miles..... ..... our soil, very dark brown, creamy and sweet-smelling, without substrata of rock or shale, was built up slowly, century after century, by the sediment gathered by the river in its solemn task of cleansing the continent and deposited in annual layers of silt on what must once have been the vast depression between itself and the hills. This ancient depression, now filled in and level, is what we call the Delta.

From: Lanterns on The Levee

By William Alexander Percy

COTTON IS STILL KING IN THE DELTA

The muted, haunting strains of "Swing Low,Sweet Chariot" have been replaced by the whirr of huge machines that looked at first quite out of place in the snow-white fields. The steady clip-clop of mules drawing wagonloads of cotton has been replaced by the hum of motor-powered trailers. Yes, times have changed, but cotton is still King of agriculture in the Delta.

An ancient fiber crop known thousands of years before the birth of Christ, cotton has always been the leading cash crop of the Delta, dominating economic, political, and social conditions. It is called a universal crop, one used by all peoples. It is also one of the most completely used plants. Clothing is the chief use, but there are over a thousand other uses--chemicals, building materials,automobiles tires, and food are only a few.

Though not a delta in the truest sense, the Mississippi Delta, the flat, fertile area along the Mississippi River from Memphis, Tennessee, to Vicksburg, Mississippi, has ideal soil and climate for growing cotton. The rich, alluvial soils deposited by the river are a mixture of clay,silt, and fine sand that support adequate moisture. In addition, there are optimum temperature and topography that lendsitself

to mechanization. Little wonder, then, with so many favorable conditions and a ready and accessible market in world trade, that the Delta has built its economy on cotton.

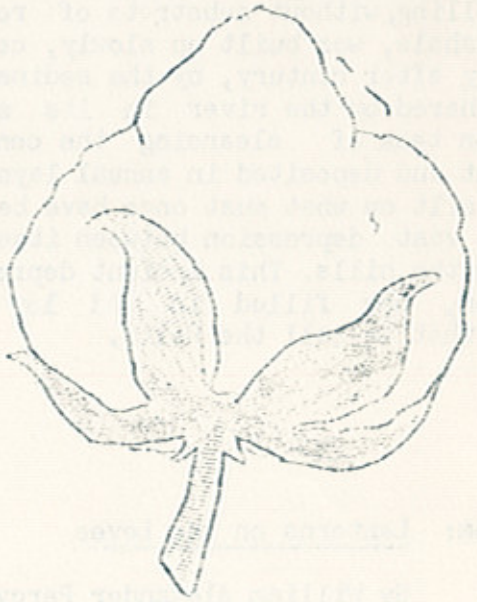
Cotton is a relatively hardy crop which is planted thickly in rows in early spring. When several inches high, the plants are thinned by hand or by machines using chemicals. Weeding by hand (Hoeing) or by flame-weeding machines is necessary for weed control, as is dusting or spraying for disease and insects. On reaching maturity, the plants are often defoliated by chemicals sprayed from planes, and the bolls are picked by hand or machines.

Farmers in the Delta are being forced to mechanize because of the scarcity and increased cost of labor. Planting and cultivating are done entirely by machine. It is estimated that 60% of weed control is done by hand, and 40% by chemicals; harvesting is about 60% by machine and 40% by hand. Government allotments on acreage planted to cotton have tended to increase the yield per acre, and thus raised the income per unit cultivated. Approximately $20,000,000 will be realized from the 1959 cotton crop in Bolivar County.

It is necessary that the government give price support to cotton growers because of the weather hazards over which the farmers have no control. In addition to the weather, pests, mainly the boll weevil, weed control, and disease are ever-present problems. Research and experimentation, with findings conveyed to the farmers by state and federal departments, are doing much to reduce these hazards. The Delta Branch Experiment Station at Stoneville, Mississippi, is concerned with special Delta problems, and progress information is made available to the farmers of this area.

The Delta Council was established twenty-five years ago to promote the improvement of government, social, and economic conditions in the Mississippi Delta. Late each spring thousands of cotton-garbed subjects gather at Delta State College to pay homage, as it were, to the ruling power. Cotton has shaped the destiny of this area. It is the flowering of this wonderful Delta soil-a resource which is both a heritage and a challenge. Henry W. Grady, an eminent Southern newspaper editor, said of cotton: "Not the fleeces that Jason sought can rival the richness of this plant, as it unfurls its banners in our fields. It is gold from the instant it puts forth its tiny shoot. The shower that whispers to it is heard around the world.....The Dominion of our king is established, this princely revenue assured, not for a year, but for all time. It is the heritage that God gave us when He arched our skies, established our mountains, girt us about with the ocean, tempered the sunshine, and measured the rain--ours and our children's forever."

Dorothy Franklin
Delta State 1960



WONDER BEAN IN THE DELTA

A little round bean with shades of the Orient in its past has found a prominent role in Delta agriculture. The soybean has become one of the leading money producers in the Delta, and is proving that this valuable food crop is useful both to man and beast.

This centuries-old bean--aged source of life-giving nutrients to the people of Asia--is relatively new in our country. Used first as a soil builder and cattle food, chemists and manufacturers came to recognize the importance of the bean itself, and the industry of soybean-processing was begun. The soybean is the largest single source of vegetable oil and livestock meal in our country.

Soil of the Mississippi Delta, fertile, friable, well-drained black clay high in organic matter, is suitable to the cultivation of soybeans, as is the climate. The plant manufactures its own nitrogen, and utilizes potash, phosphate, and trace elements which are adequate in heavy clay soils.

Unlike cotton, soybean farming is completely mechanized. Soybeans grow easily, mature quickly, and require little care. The harvested crop, delivered by the farmers' trucks and trailers to modern grain elevators throughout the Delta, has a ready market. Because of the constant demand, it is not a surplus crop. From Greenville, the beans are taken down the Mississippi River and on to waiting world markets.

No longer is the soybean planted only to be plowed under to enrich the soil or to be cut green and fed to animals as hay or silage, although these are practical uses. The bean, which has more protein than beef, more calcium than milk, and more lecithin than eggs, has many commercial uses. Valuable for oil, meal, flour, chemicals, and many other industrial products, the soybean is proving itself to be a nutritional nugget worth its weight in gold to the Mississippi Delta.

Dorothy Franklin
Delta State 1960

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The eighteen Delta and part-Delta counties of Mississippi are:

Bolivar	Quitman
Carroll	Sharkey
Coahoma	Sunflower
Desoto	Tallahatchie
Holmes	Tate
Humphreys	Tunica
Issaqueena	Warren
Leflore	Washington
Panola	Yazoo

There are 6,500,000 acres that are considered "Delta acres." 4,500,000 acres are in cropland.

In 1958
750,000 acres were in cotton
600,000 acres were in corn
500,000 acres were in soybeans
162,000 acres were in wheat
46,000 acres were in rice

Cotton and cottonseed contribute $200,000,000 annual income to the Delta.

Chemical weed controls, pre-and-post-emergence chemicals, early and more frequent poisonings for boll weevil and other pests are recommended in production of cotton.

RICE

Since the time Mississippi first realized its potentials as an agricultural region, King Cotton has enjoyed a prosperous reign. In recent years, however, a considerable amount of the land in the Delta, located in northwest Mississippi, has been given over to the cultivation of rice. Rice culture requires level land, heavy fertile soil and an impervious subsoil, plenty of water, and a temperature of over 70 degrees Farenheit. These conditions limit rice growing to specific areas and cause the intensity of it to vary considerably from one region to another. In general, rice culture is confined to the flat bottoms of river valleys and to coastal plains. Rice must have no less than 40 inches of annual rainfall and cannot be successfully cultivated above 3000 feet. The Mississippi Delta meets most of these requirements well enough to justify intensive rice production in several counties.

The rice program was instituted in the Delta to utilize profitably land which is somewhat unsuitable for the production of cotton and other field crops. The area has a great amount of buckshot land, a kind of soil which is probably the most naturally fertile in the world. It is a heavy clay soil, and, at its best, it is hard to handle in a row crop enterprise. It has a tremendously high water-holding capacity and becomes very soft and sticky when wet. When dry, the soil becomes very hard, packs easily, and cracks open as it increases in dryness. The chemical and physical properties of this type of soil enable it to hold against leaching those plant food elements which are vital to the growth of any crop. These combined properties of high fertility and water-holding capacity make the "buckshot soil" almost ideally suited for the production of rice.

Rice production is now in its eleventh year in the Mississippi Delta, and its production has consistently contributed to the state's economy. The first rice mill was built in 1952 at Scott, and in 1959 a larger one was constructed in Hollandale. In 1954, Mississippi had 82,000 acres in rice, which yielded 2,214,000 hundred-pound bags worth $9,963,000. Acreage control cut the 1955 crop to 52,000 acres. Production totaled 1,150,000 bags which were valued at $7,399,000. The 1958 production was approximately 2½ million bushels.

The present rice acreage in Mississippi, due to federal controls, is approximately 46,675 acres. The leading rice producing counties are (1) Bolivar, with 19,000 acres, (2) Washington, with 8000 acres, and (3) Leflore, with 3500 acres. The remaining 16,500 acres are planted in eleven other Delta counties. The production of this grain has undoubtedly aided the economy of the Delta area by making use of that buckshot land which was, to a degree, unsatisfactory for the raising of cotton. Rice growing has thus tripled the value of many Delta farms. Mechanization and use of available labor have been practiced to a greater extent. The deep wells installed for riceland irrigation now can supply water for other crops, such as cotton, corn, and soybeans. About 500,000 acres of land are available in Mississippi and suitable for the production of rice; if and when government controls are lifted, considerable economic growth should be apparent. With the need for additional drying and storage facilities and the installation of more rice mills, millions of dollars will pour into our state as a direct result of this new economic venture.

Working to improve the program of rice growing in the Delta is Delta and Pine Land Company at Scott, Miss. Already famous for its progress in cotton breeding, it has turned toward the development of seed rice, producing the well-known Bluebonnet 50 variety. The company also began a rice milling operation to furnish an additional outlet for the rice produced, and its leaders found that milled rice could be produced here as good as any on the market. Delta Pine and Land Company is now offering to the consumer a long-grain, bright buff, smooth-rubbed package rice with excellent cooking qualities. The experiment station in Stoneville is also carrying on rice research to prevent and control rice diseases and thus aid the rice farmer.

With the realization that the growing of rice in the Delta is an economically profitable venture, more and more landowners are utilizing their available land in its production. Planters must follow sound farming practices and bring to market a product that is top quality. The cooperation between rice growers, experimental groups, and agricultural leaders carrying on rice research projects will provide a good foundation for a relatively new element of Mississippi agriculture. Present success seems to point to future economic advantages in the growing of this valuable good crop to which four-fifths of the world's population look for sustenance.

Allen Dan Towery
Delta State, 1960

DELTA BRANCH
MISSISSIPPI AGRICULTURAL
EXPERIMENT STATION

Delta farmers are always interested in the experiments at the Delta Station on cotton, their major money crop. Over a three year period, tests have been made with the skip-rows method of cotton planting. It has been found that an increase can be expected in the 4-row planted and 4-row skipped method over the solid planted cotton.

At all times the Delta Station continues its studies of other problems of cotton farmers. More effective ways of combating the boll weevil at lower costs, more efficient defoliation, reduction of disease, and chemical weed control are some of the more critical problems studied.

The Delta Branch Station has made tests on a new early-maturing variety of soybean, the Hill. In growth and general appearance Hill is similar to Lee and in many plantings on heavy clay soils, Hill equalled Lee but it should be considered a supplement to Lee and not a replacement.

In order to develop varieties of rice suited to the Delta area, a rice breeding program was started in 1958 at the Delta Branch Station. One objective is to produce an early maturing variety and another objective is to produce a long grain variety that is resistant to a new disease, hoja blanca.

Mississippi Delta farmers have become interested in castor beans as a cash crop. This was caused by high yields of over 2000 pounds of seed per acre by farmers and in tests at the Delta Branch Station in 1955. Good yields were also produced at Stoneville in 1956 and similar yields were expected in 1957 and 1958, however, the average yields were only 914 and 405 of seed per

acre, respectively. This reduction was caused by Alternorio capsule mold. A late harvest in 1958 also caused reduction in yield.

Castorbean variety tests were grown at four locations in the Mississippi Delta in 1958 to determine the effects of location. These locations were at Cleveland, Greenwood, Stoneville, and Tunica, Mississippi. Mold occurred at each place but some varieties showed more resistance than others and should serve as valuable sources to incorporate resistance into more profitable lines. With the development of such varieties, Mississippi may have a new cash crop.

Plantings of sesame have been made at the Delta Experiment Station for several years. An average yield of 1754 pounds per acre was produced in 1957. The yield was lower in 1958, but some varieties still have excellent yields. Other varieties were affected by a plant malfunction of unknown origin.

In 1958 fifteen varieties of sesame were grown at Cleveland, Greenwood, and Stoneville, Mississippi, with higher yields at Cleveland than the other places. Over 2000 pounds per acre were produced by the top ranking variety at Cleveland.

The estimated cost of sesame production per acre is $60. By producing 1000 pounds per acre at the present price of around 10 cents per pound, a net return of $40 per acre can be expected. The Delta Station says that the production of sesame is limited now because of harvesting problems. The seeds are small and the seed pods are easily damaged. The threshing problem may be solved by the production, through plant breeding, of varieties that will be easier to combine. Disease may be another hindrance to sesame production. Bacterial leaf mold is the most prevalent disease. Other diseases have attacked the plant at maturity and have caused only small reduction in yields, but if the attack should come earlier in the season, the results would be different. By crop rotation, the use of disease-free planting seed, and the development of resistant varieties, the diseases of sesame should be controlled.

With Delta rainfall about five inches below normal on an average of four years in ten, more and more planters are turning to irrigation as standard agricultural practice. Despite excessive rainfall which hindered the 1958 irrigation studies at the Delta Experiment Station, it has been found that the sprinkler and flooding irrigation systems are being replaced by gated pipes and siphon tubes on many plantations. Approximately 85 percent of the irrigated acres were planted to cotton.

On October 1, [illegible], the Experimental Weather Project for the Delta was initiated by the Delta Branch Experiment Station, Stoneville, Mississippi, in cooperation with the United States Weather Bureau. Weather information carried by direct wires from the Weather Bureau offices at Jackson, Memphis, Vicksburg, and Stoneville is sent out by teletype circuits to radio stations in Clarksdale, Cleveland, Greenville, Greenwood, Indianola, and to the County Agent's office in Tunica.

Long range and daily forecasts are used by planters in determining planting, cultivating and harvesting dates, as well as correct weather conditions for dusting or spraying of insecticides and the applying of defoliants. Soil temperatures during the planting period are also a part of the informational reports.

If Congressional appropriations being asked for are made, this forecasting service will be extended to the entire Mid-South area.

Donnis McDonald
Delta State 1961

DELTA AND PINE LAND COMPANY

One of the most outstanding examples of modern agriculture in the world is located in the southwest corner of Bolivar county, Mississippi, this being the plantation of Delta and Pine Land Company, which is owned by an English textile firm. One of the largest farms in the world, this self-contained unit is composed of some 38,000 acres, 25,000 of which are put to proper and profitable use in crops, and 6,000 acres are used in raising and developing cattle and other livestock. The remaining land is used for a variety of purposes, including many acres in mixed decidious and hardwood timber.

D&PL supports some 600 families, including some 75 white families and close to 450 Negro families. The workers are now on a day-wage scale, this scale having replaced the old tenant system which was used for many years. There is a medical department which provides the essential medical needs of the employees, and there is the Department of Supply which supplies materials needed for home maintenance, buildings and farm equipment.

This self-contained unit, with headquarters under the direction of Mr. Minor S. Gray, located at Scott, Mississippi, is responsible for the works of the farm operation. The plant is divided into 17 plantation units, each unit having at its head a unit manager who lives on his unit and acts as its administrator, subject to the overall production program of the central organization. Each unit maintains its own service center for preventive repair and maintenance for farm machinery.

To illustrate D & PL's forward look and flexibility we see that this organization was the first in its particular area to poison for boll weevil, and today employs an entomologist who recommends when, where, and how its poisoning shall be done. Also D & PL was one of the first major farms to begin irrigation of cotton in the dry seasons to help increase yields. Today there are some 18 large wells on the company holdings making it possible to irrigate a large portion of the crop land when the need arises. D & PL has recently opened its new meat processing plant. In addition to beef, the plant processes pork, lamb, bacon, and a variety of other meats. The farm system is considered by farmers in the area as a guide to new and better crop yields and more efficient farming methods.

Outstanding in its experimenting in crop variety development, D & PL stands first in its production, having broken unprecedented production records through its far-seeing, flexible central organization which looks to the future in research, experiment and regulated farm procedures.

Jimmy Cutz
Delta State '60

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FOR YOUR READING:

LANTERNS ON THE LEVEE by
William Alexander Percy

WHERE MAIN STREET MEETS THE RIVER by
Hodding Carter

THE LIFE AND TIMES OF KING COTTON by
David Cohn

DELTA DECAMERON edited by
Ellen Orr and Evelyn Hammett

Juveniles:

COTTON IN MY SACK by
Lois Lenski

THE FIRST BOOK OF COTTON by
Matilde Rogers

THE SCIENCE FAIR

Geography teachers throughout the state should find their local, district, state and National Science Fair worthy of whole-hearted interest and cooperation. Science Fairs offer opportunity for scientific talent to be displayed in many specialized fields. These have been classified according to grade levels and divided by subject matter into Biology, Chemistry, Physics, Engineering, Mathematics and Space, and Earth Science, at the High School level. As a Geography teacher you might be interested to note that you would be able to enter exhibits in the Earth Sciences division which includes Physical Geography, Geology Physiography, and Soil and mineral Conservation.

In the lower grades beginning with Grade 1 through 4, group entries may be made in local fairs in the various sciences. The Class II, or 5th and 6th grade projects may be entered in the local and District Fair by either groups or individual class members in all sciences. Class III, 7th and 8th grades, may enter local, district and State Science Fairs with individual entries only. This classification is divided in to Biological and Physical sciences.

This program has been widely accepted in schools throughout Mississippi, and the United States, as an integral part of a good science program. It offers a means of recognition of talent, motivation of the desire for scientific experimentation and discovery, encourages talented youth to enter scientific careers as well as focusing attention on science within the school and community. The true value of this program is not in the final prize or ribbon won but rather the accumulated knowledge and the opportunity to see the entire fair and exchange ideas and observe the work of others.

The various District Science Fair dates are announced by the respective chairman. (Our own Delta District III Fair will be in the Gymnasium of D.S.C. on April 8th and 9th.) The winners in each division of Classes III, IV and V from the seven districts will enter the State Science Fair which is scheduled for April 29-30, at the State Fair Grounds, Jackson.

The State Science Fair Chairman for 1959-60 is Dr. A.H. Germany, Mississippi College. The one major change in the rules found in the current handbook is in the size of the exhibit space. The size is limited to 48" along the table front and 30" deep instead of 48" by 36" as last year. Further information may be obtained from the chairman of your district Science Fair who is distributing the 1959 Science Fair Handbook as long as the supply lasts.

These Chairmen are as follows:

Chairman	Location	District
Virgil M. Benson	University of Mississippi	I
W. F. McCormick	Mississippi State College for Women	II
Henry Lutrick	Delta State College	III
C. L. Deevers	Mississippi College	IV
B. G. Raden	East Central Jr. College	V
Fred Walker	Mississippi Southern College	VI
J. D. Prince	Southwest Jr. College	VII

Henry Lutrick
Associate Professor of Chemistry
Delta State College

GEOGRAPHY SECTION M. E. A.
Friday, March 25, 1960

Time....8:30 A. M. Business Meeting
Place.....Clubroom YWCA Building

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Time.....9:15 A. M. Joint Meeting with Social Studies Group
Place.....War Memorial Building

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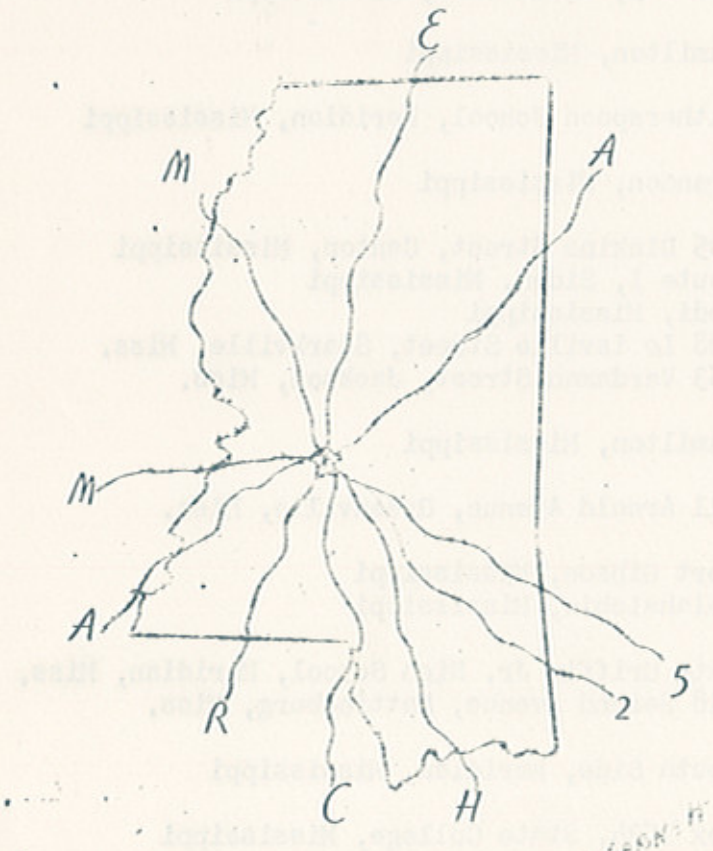
The program has been set up in accordance with the M.E.A. President's slogan--"Quality Education--The State's Best Economic Investment."

Dr. W. D. Ross, Dean of L. S. U. School of Commerce will address the joint meeting of the Geography and Social Studies Sections.

Dr. Arthell Kelley and Mr. G. Lloyd Collier of Mississippi Southern Geography Department will present materials showing resource bases of our country and state, and the part geography plays in our economic growth.

Elise Curtis, Chairman



COMING EVENTS

Geography Division, M. E. A.
Business Meeting
8:30 A. M., March 25, 1960
Club Room, Y. W. C. A.
Jackson, Mississippi

Joint Meeting with
Social Studies Group
9:15 A. M., March 25, 1960
War Memorial Building
Jackson, Mississippi

Association of American Geographers
April 18--22, 1960
Dallas, Texas

International Geographical Union
Middle August, 1960
Stockholm, Sweden

National Council for Geographic Education
November 25--26, 1960
Cincinnati, Ohio

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This Newsletter initiates what the editor of Issue No. 2, in each volume, hopes will be a series of studies on the "Yazoo-Mississippi Delta." Watch for other issues in this series.

Thanks to Mr. B. F. Smith, Executive Vice President, Delta Council for bulletins.

Thanks to Mr. Harold D. Lyons, Mississippi Rice Growers' Association, for information on rice.

Cover design and other art work by Ellen Moore, Delta State, '62.

Thanks to Miss Kathryn Keener, Assistant Professor of Business, and her class in Secretarial Office Practice for make-up, mimeographing, and assembling this volume of the Geography Newsletter.

PLEASE HELP THE EDITORS OF THE NEWSLETTER

The editors of the Mississippi Geography Newsletter are attempting to bring the mailing list up to date. The last issue carried an appeal to you to help in this work.

If your name does not appear on the following list, and you want the Newsletter to keep coming to you, fill out the "coupon" on the following page and mail to Miss Carol Brumby, Delta State College, Cleveland, Mississippi.

Name	Mailing Address
Mrs. Addie Adair	Hamilton School, Hamilton, Mississippi
Mrs. H. E. Broadfoot	Shuqualak, Mississippi
Mrs. T. L. Bond	Perkinston, Mississippi
Mrs. David Carpenter	Prairie Point, Mississippi
Mr. Ellis Chance, Jr.	1520 17th Avenue, Meridian, Mississippi
Mrs. Louise Charles	Box 1534, State College, Mississippi
Mrs. Elise Curtis	Utica, Mississippi
Mr. Bobby DePoyster	Route 1, Burnsville, Mississippi
Mr. Thomas Dwyer	213 North Liberty, Canton, Mississippi
Mrs. Mary Fikes	215 Pine Acres Subdivision, Forest, Miss.
Mrs. Marguerite Fulton	Route 3, Louisville, Mississippi
Mrs. Ed Gilliland	Hamilton, Mississippi
Miss Austin Johnston	Witherspoon School, Meridian, Mississippi
Mrs. F. M. Lowther	Brandon, Mississippi
Mrs. Amelia Massey	205 Dinkins Street, Canton, Mississippi
Mrs. C. C. Mitchell	Route 1, Sidon, Mississippi
Miss Minnie B. Mitchell	Lodi, Mississippi
Mr. Clyde Muse	208 Louisville Street, Starkville, Miss.
Miss Rosa Mae Myers	353 Vardaman Street, Jackson, Miss.
Mrs. Joe T. Owings	Hamilton, Mississippi
Miss Annie Grace Parks	811 Arnold Avenue, Greenville, Miss.
Mrs. Robert Segrest	Port Gibson, Mississippi
Mrs. J. P. Summer	Pelahatchie, Mississippi
Mrs. Mary Otis Toles	Kate Griffin Jr. High School, Meridian, Miss.
Mrs. E. R. Trussell	218 Second Avenue, Hattiesburg, Miss.
Miss Vergie Upton	South Side, Meridian, Mississippi
Dr. D. H. Vass	Box 1534, State College, Mississippi
Miss Josephine Wofford	Calhoun City, Mississippi

HELP! HELP!

Fill out this "coupon" and mail to: Miss Carol Brumby, Delta State College, Cleveland, Mississippi.

Name:_____ Mailing Address:_____

City:_____ County:_____

School:_____ Grade Taught:_____
