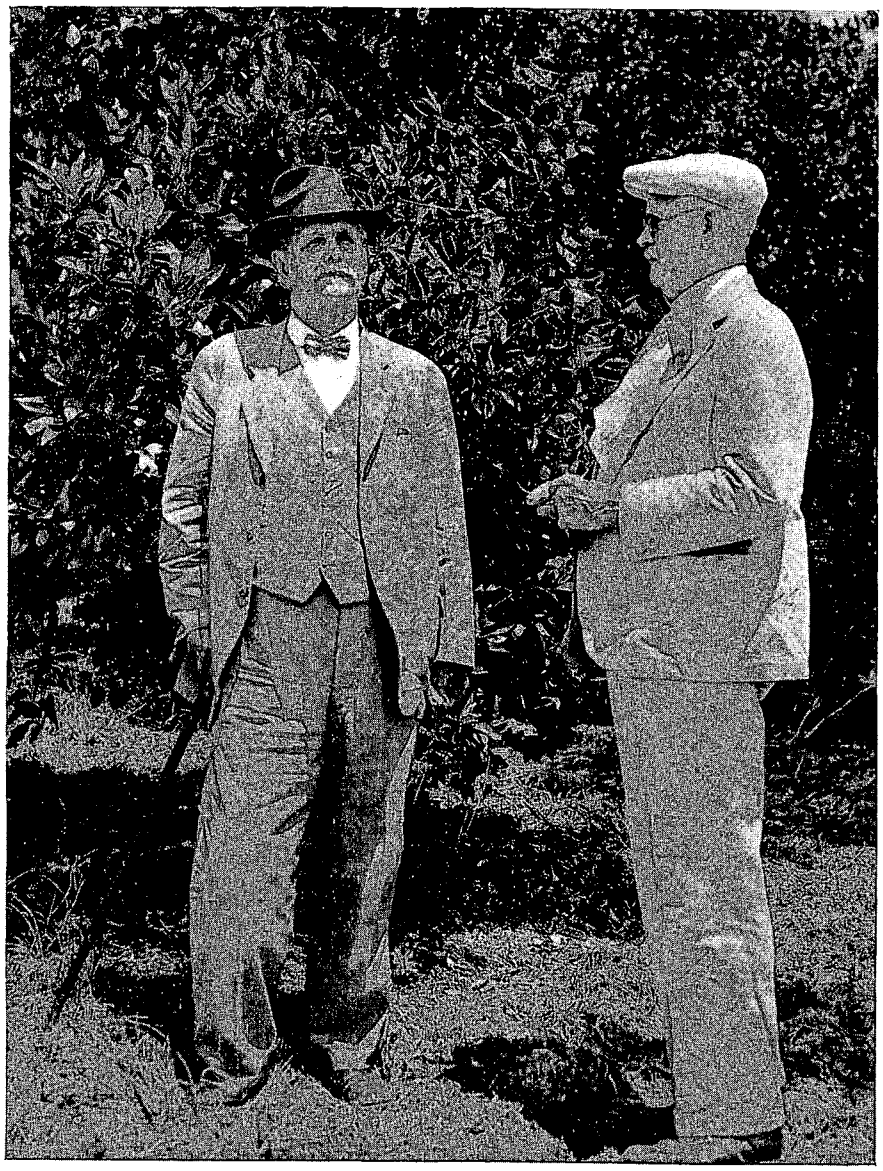

H. B. STEVENS AND P. H. ROLFS

PIONEERS IN FLORIDA HORTICULTURE AS SEEN AT DELAND MEETING

PROCEEDINGS

OF THE

FORTY-NINTH ANNUAL MEETING

OF THE

Florida State Horticultural Society

HELD AT

DE LAND, FLORIDA

May 5, 6 and 7

1936

PUBLISHED BY THE SOCIETY

OFFICE OF PUBLICATION, DELAND, FLORIDA

Florida State Horticultural Society
Officers Elect for 1937

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JOHN S. TAYLOR (deceased)
Largo

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Coconut Grove

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Homestead

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EXECUTIVE COMMITTEE

F. M. O'BYRNE, Lake Wales

H. HAROLD HUME, Gainesville

T. RALPH ROBINSON, Orlando

Constitution

Article 1. This organization shall be known as the Florida State Horticultural Society, and its object shall be the advancement of Horticulture.

Article 2. Any person or firm may become an annual member of the Society by subscribing to the Constitution and paying two dollars. Any person or firm may become a perennial member of the Society by subscribing to the Constitution and paying the annual dues for five or more years in advance. Any person or firm may become an annual sustaining member of the Society by subscribing to the Constitution and paying ten dollars. Any person may become a life member of the Society by subscribing to the Constitution and paying twenty-five dollars. Any person or firm may become a patron of the Society by subscribing to the Constitution and paying one hundred dollars.

Article 3. Its officers shall consist of a President, three Vice-Presidents, Secretary, Treasurer and Executive Committee of three, who shall be elected by ballot at each annual meeting. These officers shall take their positions immediately following their election.

Article 4. The regular annual meeting of this Society shall be held on the second Tuesday in April, except when ordered by the Executive Committee.

Article 5. The duties of the President, Vice-Presidents, Secretary and Treasurer shall be such as usually devolve on these officers. The President, Secretary and Treasurer shall be ex-officio members of the Executive Committee.

Article 6. The Executive Committee shall have authority to act for the Societv between annual meetings.

Article 7. The Constitution may be amended by vote of two-thirds of the members present.

Article 8. A section of the annual program of the Society shall be devoted to the discussion of sub-tropical fruits, exclusive of the commonly grown varieties of citrus fruits. This section shall be known as the *Krome Memorial Institute.* It shall be presided over by a fourth vice-president who shall be elected by ballot at each annual meeting by the members in attendance at the Institute. The fourth vice-president shall be an ex-officio member of the Executive Committee.

By-Laws

1. The Society year shall be co-extensive with the calendar year, and the annual dues of members shall be two dollars.

2. All bills authorized by the Society or its Executive Committee, for its legitimate expenses, shall be paid by the Secretary's draft on the Treasurer, O. K.'d by the President.

3. The meetings of the Society shall be devoted only to Horticultural topics, from scientific and practical standpoints, and the presiding officer shall rule out of order all motions, resolutions and discussions tending to commit this Society to partisan politics or mercantile ventures.

4. All patrons and life membership dues and all donations, unless otherwise specified, shall be invested by the Treasurer in United States bonds. Only the interest in these bonds shall be available for payment of the current expenses of the Society. Perennial membership dues shall be placed on deposit at interest by the Treasurer. Only two dollars and the interest from each perennial membership fee shall be available for use in payment of current expenses of the Society during any particular year.

List of Members

HONORARY MEMBERS

Fairchild, Dr. David, Coconut Grove, Fla.
Haden, Mrs. Florence P., Coconut Grove, Fla.
Hart, W. S., Hawks Park, Fla.
Hubbard, E. S., Federal Point, Fla.
Hume, H. Harold, Gainesville, Fla.
Lipsey, L. W., Blanton, Fla.
Rolfs, P. H., Gainesville, Fla.
Shaw, Miss Eleanor G., Gainesville, Fla.
Skinner, L. B., Dunedin, Fla. (Deceased.)
Stevens, H. B., DeLand, Fla.
Wilson, Lorenzo A., Jacksonville, Fla. (Deceased.)

PATRON MEMBERS

COMPANIES

American Agricultural Chemical Co., Jacksonville, Fla.
American Fruit Growers, Inc., Orlando, Fla.
Angebilt Hotel Co., Orlando, Fla.
Armour Fertilizer Works, Jacksonville, Fla.
Buckeye Nurseries, Glen St. Mary, Fla.
Chase & Co., Orlando, Fla.
Coral Reef Nurseries Co., Homestead, Fla.
Deerfield Groves Co., Wabasso, Fla.
Deering, Chas., Miami, Fla.
Exchange Supply Co., Tampa, Fla.
Exotic Gardens, Miami, Fla.
Florida Citrus Exchange, Tampa, Fla.
Florida East Coast Hotel Co., St. Augustine, Fla.
Florida Grower Publishing Co., Tampa, Fla.
The Fruitlands Co., Lake Alfred, Fla.
Glen St. Mary Nurseries Co., Glen St. Mary, Fla.
Gulf Fertilizer Co., Tampa, Fla.
H. G. Hastings Co., Atlanta, Ga.
Hillsboro Hotel, Tampa, Fla.
Klemm, A. M., & Sons, Winter Haven, Fla.
Lake Garfield Nurseries Co., Bartow, Fla.
Manatee Fruit Co., Palmetto, Fla.
Mills, The Florist, Jacksonville, Fla.
Nocatee Fruit Co., Nocatee, Fla.
Oklawaha Nurseries Co., Inc., Lake Jem, Fla.
Peninsular Chemical Co., Orlando, Fla.
J. Schnarr & Co., Orlando, Fla.
Southern Crate Manufacturers Assn.
Thomas Advertising Service.
Van Fleet Co., Winter Haven, Fla.
Wilson & Toomer Fertilizer Co., Jacksonville, Fla.

INDIVIDUALS

Beach, John B., West Palm Beach, Fla. (Deceased)
Gardner, F. C., Lake Alfred, Fla.
Hart, W. S., New Smyrna, Fla.
Krome, W. J., Homestead, Fla. (Deceased.)
Rolfs, P. H., Gainesville, Fla.
Sampson, F. G., Boardman, Fla. (Deceased.)
Skinner, L. B., Dunedin, Fla. (Deceased.)
Taylor, John S., Largo, Fla. (Deceased.)

LIFE MEMBERS

Albertson Public Library, Orlando, Fla.
Allenbrand, Alfred, Box 228, Frostproof, Fla.
Alderman, A. D., Bartow, Fla.
Anderson, Frank K., Altamonte Springs, Fla.
Andrews, C. W., John Crerar Library, Chicago, Illinois.
Baltram, Francisco, Monterey, N. L., New Mexico.
Barber, C. F., Macclenny, Fla.
Bartlum, W. Leonard, Fla. Agricultural Supply Co., Orlando, Fla.
Berger, E. W., Gainesville, Fla.
Berger, Mrs. E. W., Gainesville, Fla.
Bouis, Clarence G., P. O. Box 6, Ft. Meade, Fla.
Britt, John F., Ft. Pierce, Fla.
Carnegie, Mrs. T. M., Fernandina, Fla.
Champlain, A. E., R. F. D. No. 1, Palmetto, Fla.
Chase, Joshua C., Winter Park, Fla.
Chidester, D. D., 446 Painter Ave., Whittier, Cal.
Christiancy, Cornelius, Port Orange, Fla.
Clement, Waldo P., Georgiana, Fla.
Conner, Wayne E., New Smyrna, Fla.
Cook, R. F., Leesburg, Fla.
Cornell, H. E., Winter Haven, Fla.
County Agricultural Agent, Orange County, Orlando, Fla.
Crutchfield & Woolfolk, Pa., Produce Building, Pittsburgh, Pa.
Drew, Prof. Wm. L., Eagle Lake, Fla.

Dunedin Public Library, Dunedin, Fla.
Ellsworth, W. J., Blanton, Fla.
Emerson, Geo. D., Coconut Grove, Fla.
Fairchild, Dr. David, Coconut Grove, Fla.
Fairchild, Mrs. David, Coconut Grove, Fla.
Fugazzi, John, care of Fugazzi Bros., Clearwater, Fla.
Gifford, John, Coconut Grove, Fla.
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Hubbard, E. S., Federal Point, Fla.
Hume, H. Harold, Gainesville, Fla.
Iowa State College Library, Ames, Iowa.
Johnston, S. W., DeLand, Fla.
Lassen, H. C., Bean Spray Pump Co., San Jose, California.
Lauman, G. N., Ithaca, N. Y.
Leonard, George V., Hastings, Fla.
Lyons, Chas. W., care Lyons Fertilizer Co., Tampa, Fla.
Martin, A. Wm., Box 36, Sebastian, Fla.
Mackay, Alexander, Glencruitten, Oban, Argyleshire, Scotland.
McCarty, B. K., Eldred, Fla.
McCarty, Mrs. C. T., Eldred, Fla.
Merrick, Geo., Coral Gables, Fla.
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Meyer, Carl, 2144 Slane Ave., Norwood, Ohio.
Michael, A. B., Wabasso, Fla.
Morley, John, Lake Alfred, Fla.
Moses, Wallace S., Palm Beach, Fla.
Mountain Lake Corporation, Lake Wales, Fla.
Myer, H. Van W., Coconut Grove, Fla.
Neville, H. O., Lonja Del Commercio, 542, Havana, Cuba.
O'Byrne, F. M., Lake Wales, Fla.
Ohmer, C. J., West Palm Beach, Fla.
Olivebaum, J. E., 7216 Clinton Ave., Cleveland, Ohio.
Pennock, Henry S., Jupiter, Fla.
Phillips, Dr. P. & Sons, Orlando, Fla.
Pike, W. N., Blanton, Fla.
Porcher, E. P., Cocoa, Fla.
Porcher, Mrs. E. P., Cocoa, Fla.
Prange, Mrs. Nettie M. G., Orlando, Fla.
Raulerson, J. Ed., Arcadia, Fla.
Reasoner, N. A., Oneco, Fla.
Reid, W. C., Largo, Fla.
Ricketson, Mrs. M. C., "Grayfield," Fernandina, Florida.
Rolfs, Prof. P. H., Gainesville, Fla.
Sample, J. W., Haines City, Fla.
Sandlin, A. R., Leesburg, Fla.
Schuman, Albert, Seabstian, Fla.
Sellards, Dr. E. H., State Geologist, Austin, Texas.
Shepherd, Louis H., P. O. Box 175, DeLand, Fla.
Stanton, F. W., Dock and Walnut Sts., Philadelphia, Pa.
Stevens, Edmund, Verge Alta, Porto Rico.
Strauss, J. E., Plant City, Fla.
Stuart, L. E., Montemorelos, Mexico.
Taylor, J. S., Jr., Largo, Fla.
Thomas, Jefferson, Gainesville, Fla
Towns, Thomas R., Holguin, Cuba.
Trelease, Wm., University of Illinois, Urbana, Ill..
Trueman, R. B., Jacksonville, Fla.
Wilson, Lorenzo A., Jacksonville, Fla.
Wirt, E. L., Box 144, Babson Park.
Yothers, W. W., Orlando, Fla.

CONTINUING MEMBERS

Cleveland Public Library, 325 Superior Ave., N. E., Cleveland, Ohio.
Library Citrus Experiment Station, Riverside, California.
Library, Florida Agricultural Experiment Station, Gainesville, Fla.
Library, U. S. Department of Agriculture, Washington, D. C

PERENNIAL MEMBERS

Adams, Dr. Chas. W., Adams' Groves, Lake Alfred, Fla. 1936-37.
Atwood Grapefruit Co., Manavista, Fla. 1936-40.
Aycrigg, Geo. B., Winter Haven, Fla. 1935-39.

Babson Park Citrus Growers Ass'n, Babson Park, Fla. 1932-36.
Bennett, Harry W., Pres. China-Tung Oil, Inc., Gainesville, Fla. 1936-37.

Billings, H. G., Lowell, Fla. 1934-38.

Daetwyler, M. J., Orlando, Fla. 1935-39.
Dixie Lime Products Co., Ocala, Fla. 1932-36.

Fenton, Alfred, 1104 Second Nat. Bank Bldg., Houston, Texas. 1935-36.
Florence Citrus Growers' Assn, Florence Villa, Fla. 1936-37

Florida Brogdex Distributors, Inc., Dunedin, Fla. 1932-36.
Florida Citrus Machinery Company, Dunedin, Fla. 1932-36.
Floyd, Maj. W. L., University of Florida, Gainesville, Fla. 1936-40.
Futch, Ivey E., Lake Placid, Fla. 1936-37.

Geier, P. A., 540 E. 105th St., Cleveland, Ohio. 1934-38.
Greenamyer, A. G., 302 Highland Ave., Buffalo, N. Y. 1935-39.

Hartt, E. W., Avon Park, Fla. 1936-37.
Hatch, H. B., Dunedin, Fla. 1935-36.
Hodges, Senator Wm. C., Tallahassee, Fla. 1936-37.
Holtsberg, Fred, Ft. Pierce, Fla. 1936-40.

International Fruit Corp., Winter Haven. 1936-40.

Jacocks, A. J., Winter Haven, Fla. 1936-40.

Keenan Soil Laboratory, Frostproof, Fla. 1936-40.
Kime, Chas. D., Box 222, Orlando. 1936-37.
Kirkland, L. P., Auburndale. 1936-37.

Lewis, E. L., North Easton, Mass. 1935-36.
Lyons, C. W., Lyons Fertilizer Co., Tampa, Fla. 1934-36.

Maher, W. J., Maher's Dept. Store, Vero Beach. 1936-40.
Manatee Hammock Fruit Company, Manatee, Fla. 1934-38.
Meyer, Carl, 2144 Slane Ave., Norwood, Ohio. 1935-39.
Mowery, John N., 100 Barber Ave., Worcester, Mass. 1934-36.

Pacific Coast Borax Company, 51 Madison Ave., New York City. 1936-37.
Price, Mitchell D., 610-615 Biscayne Bldg., Miami, Fla. 1936-37.
Pringle, H. L., Leesburg, Fla. 1936-37.

Robins, Mrs. Raymond, Chinsegut Hill, Brooksville, Fla. 1934-36.
Robinson, T. Ralph, Box 1058, Orlando, Fla. 1936-40.

Sexton, W. E., Vero Beach, Fla. 1936-37.
Spencer, A. P., Gainesville, Fla. 1934-36.
Stone Farm Association, 90 Broad Street, New York City. 1936-40.
Stuart, J. K., Stuart Bros. Corp., Bartow, Fla. 1936-37.

Traub, Dr. H. P., Box 1058, Orlando, Fla. 1935-36.

Valentine, G. C., Manatee Fruit Co., Palmetto. 1936-37.

Walker, Eli C., Vero Beach, Fla. 1934-36.
Weinschenck, G., 109 Av. Rio Branco, Rio de Janeiro, Brazil. 1933-37.
Wilson & Toomer Fertilizer Co., Jacksonville, Fla. 1935-39.
Winston, J. R., Box 1058, Orlando, Fla. 1936-37.
Wolf, Dr. Frederick A., Duke University, Durham, N. C. 1935-36.
Woltz, James M., 362 Lora Avenue, Youngstown, Ohio. 1934-36.

ANNUAL MEMBERS IN STATE

A. & W. Bulb Company, Clearwater.
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Abbott, Prof. Chas. E., U. of F., Gainesville.
Adair, J. O., 508 N. First St., Lake Wales.
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Barnett, W. L. E., Box 153, Mt. Dora.
Barney, J. W., Bradenton.
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Barrow, David C., DeSoto City Nurseries, DeSoto City.
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Beckler, W. A., Box 1657, Sarasota.
Berry, J. R., Waverly.
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Borland, H. L., Ocala.
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Brockway, Capt. E. K., Clermont.
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Brooks, J. R., Homestead.
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Brown, Earl, DeLand.
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Brown, L. H., Box 3403, Ft. Lauderdale.
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Coral Reef Nurseries Co., Homestead.
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Crenshaw-McMichael Seed Co., Tampa.
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Dahlberg, K., 252 N. E. 28th St., Miami.
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Dowling, Paul M., 440 Highlands St., Orlando.
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Dunne, Jesse H., San Antonio.

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Eddy, Miss Bertha, Mt. Dora.
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Edsall, R. S., Wabasso.
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Florida Agricultural Supply Co., Orlando.
Florida Brogdex Distributors, Inc., Dunedin.
Florida Citrus Exchange, Tampa.
Florida Dolomite Company, Pembroke.
Florida Favorite Fertilizer Co., Lakeland.
Floridagold Citrus Corp., Box 535, Melbourne.
Floridagold Citrus Corp., Lake Alfred.
Florida Insecticide Co., Apopka.
Forbes, Chas. C., Hollywood.
Francis, John, Lake Wales.
Frasse, Wm. H., Box 134, Coral Gables.
Freeman, R. E., Care Lyons Fertilizer Co., Tampa.
Frey, John, Rockledge.
Fudge, D. R., Lake Alfred.
Fuller, Wm. Allison, Box 176, Cocoa.

Galliver, Mrs. Lillian, Tavares.
Gardner, F. C., Lake Alfred.
Gardner, Mrs. F. C., Lake Alfred.
Garnett, Irl B., Hypoluxo.
Garrett, Chas. A., Route 1, Box 104, Kissimmee.
Geier, W. G., Windemere.
Gleason, Miss Flavia, St. Home Demonstration Agt., Tallahassee.
Glynn, W. F., Crescent City.
Gocio, H. G., Sarasota.
Gooch, S. D., Pembroke.
Goodwin, J. C., Gainesville.
Grant, A. J. Dunedin.
Graves, Hubert, Wabasso.
Graves, W. C., Vero Beach.
Griffin, J. A., Box 1809, Tampa.
Gulf Fertilizer Co., Tampa.
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Harding, Paul L., Box 1058, Orlando.
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Haynes, Bayless W., Care Wilson & Toomer, Jacksonville.
Hayward, Wyndham, Winter Park.
Heist, John R., Box 464, St. Augustine.
Henderson, Carl E., Zellwood.
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Hill, Arthur M., Jr., Citroculturist, Box 1123, Vero Beach.
Hodnett, J. Victor, Auburndale.
Hoenshel, Paul M., Port Mayaca.
Hoffman, Mrs. Isabel, Winter Haven.
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Horne, W. N., Bonita Springs.
Howard, Frank L., Winter Haven.

Howard, R. H., Agric. Extension Division, Gainesville.
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Jackson Grain Company, Tampa.
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Johnson, Mrs. Jack, Largo.
Jones, H. S,, Vero Beach.
Jordahn, A. C., Box 292, Coconut Grove.

Kanawha Groves Co., Ft. Pierce.
Kasal, R., Fruitland Park.
Keller, H. J., Dunedin.
Keown, Miss Mary E., Home Demonstration Division, Tallahassee.
King, Batty, Estero.
Kirkhuff, W. O., Mgr., Bradenton Citrus Growers Assn, Bradenton.
Kissimmee Citrus Growers' Ass'n, Box 411, Kissimmee.
Klemm, A. M. & Son, Winter Haven.
Knight, Peter O., Tampa.
Knight & Wall Co., Tampa.
Knox, L. B., Ormond Beach.
Koblegard, Ruhl W., Box 750, Ft. Pierce.
Krome, Mrs. Wm. J., Homestead.
Krome, Wm. H., Homestead.
Kuntz, Wm. A., Lake Alfred.
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Lake Region Hotel, Winter Haven.
Larsson, Jonas, R. D. 1, Box 27, Apopka.
Law, Percy E., Sec'y, Mapes Formula & Guano Co., Jacksonville.
Lawton, J. G., Bartow.
Lester, H., Plymouth.
Lewis, H. F., Terra Ceia.
Lewis, Mrs. W. H., Largo.
Little, Pete, DeLand.
Lockett, N. A., Cocoa.
Logan, John Henry, County Agent, Bradenton.
Loomis, Burdett, Jr., American Agric. Chemical Co., Pierce.
Lord, Prof. E. L., Orlando.
Lord, Richard P., Box 788, Winter Haven.
Loudon, Hugh R., Babson Park.
Lyle, Miss Jane P., San Mateo.
Lyles, W. J., Summerfield.
Lyons Fertilizer Co., Tampa.

McCabe, P., San Antonio.
McCormick, Holland, Hotel Thomas Jefferson, Tampa.
McLennan, C. M., Care Florida Grower, Tampa.
McMahan, Kirby, Box 31, Lakeland.
McPeck, John K., Box 952, Sebring.

Mabson, H. B., Lake Region Hotel, Winter Haven.
Malone, T. E., Odessa.
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Matheson, Hugh M., 418 S. W. Second Ave., Miami.
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Mathias, A. C., Lake Wales.
Maxey, L., Inc., Frostproof.
May, John F., Winter Haven.
Mayaca Corp., The, Port Mayaca.
Mead, Theodore L., Oviedo.
Michael, A. B., Wabasso.
Miller, Ralph S., Fla. Agricultural Supply Co., Orlando.
Miner, James T., R. R. 1, Lake Worth.
Monsalvatge, R. F., Sanford.
Montgomery, Col. Robt. H., Cutler Road, Coconut Grove.
Morrell, P. C., Avon Park.
Morse, Geo. A., Babson Park.
Moule, R. F., Sanford.
Mouser, W. H. & Co., Orlando.
Mowry, Harold, Gainesville.
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Myers, H. W., Bartow.

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Nettles, W. T., Gainesville.
Newell, Dr. Wilmon, Gainesville.
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Nordman, Ferd, New Smyrna.
Norton, James S., Box 589, Lakeland.

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O'Kelley, E. B., Drawer 1, Jacksonville.
Olmstead, George C., Indian River City.
Osborn, M. R., Box 491, Orlando.

Palmer, H. W., Fruitland Park.
Palmer, J. C., Windemere.
Pardee, S. C., Avon Park.
Parrish, Sen. Jesse J., Titusville.
Peacock, A. J., Plant City.
Pearce, Eugene L., Clearwater.
Pederson, W. M., Waverly.
Pennock, Herbert A., Box 118, Jupiter.
Pepper Printing Co., Gainesville.
Platts, Norman G., Ft. Pierce.
Poole, S. F., Lake Alfred.
Pope, H. D., Florida Cypress Gardens, Winter Haven.
Poynter, R. R., Micco.

Princess Groves, Inc., Lake Wales.
Prine, R. H., Terra Ceia.
Putnam, H. G., Oak Hill.

Quaintance, W. D., Lake Wales.
Quesse, Mrs Margaret A., R. R. 2, Ft. Pierce.

Raney, Geo. P., Box 1097, Tampa.
Ray, Alexander, City Hall, Jacksonville.
Reuther, H., Experiment Station, Gainesville.
Rhoads, Dr. A. S., Cocoa.
Rhodes, L. M., 204 St. James Bldg., Jacksonville.
Riedman, Mrs. Rose, San Antonio.
Roberts, A., Dade City.
Robertson, Paul F., Box 842, Miami.
Roell, Gus, Asst. Mgr. Mayaca Corp., Port Mayaca.
Roess, M. J. Box 388, Jacksonville.
Rohde, W., Sebring.
Rolfs, Clarissa (Miss), 509 E. Church St., Gainesville.
Ronald, T. G., Cocoa.
Ronald, W. F., Box 5204, Daytona.
Rue, Frank B., Homestead.
Ruehle, Dr. Geo. D., Homestead.
Ruprecht, Dr. R. W., Gainesville.

Schoenthaler, M. E., Winter Haven.
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Scott, W. M., Sanford.
Shepherd, Mrs. L. H., Box 175, DeLand.
Shinn, Chas. M., Lake Alfred.
Shippy, Dr. W. B., Leesburg.
Simpson, C. A., Monticello.
Simpson, James, Mt. Dora.
Skinner, B. C., Dunedin.
Skinner, F. L., Dunedin.
Skinner, Mrs. L. B. (Mary E.), Dunedin.
Sloan, G. D., Box 2721, Tampa.
Smith, C. F., Largo.
Smith, Horace C., Care C. of C., Ocala.
Smith, H. H., Haines City.
Smith, Oscar, Box 162, City Point.
Smith, Sidney, Winter Haven.
Snively, John, Winter Haven.
Snodgrass, Wm. S., Clermont (Box No. 2)
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Spencer, Dr. Herbert, Box 591, Orlando.
Springer, John H., Orlando.
Stabler, David K., Lake Wales.
Stahl, Dr. A. L., Gainesville.
Stansfield, Chas., Wauchula.
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Stevenson Seed Stores, Box 224, Delray Beach.
Stewart, R. M. III, Box 1177, Orlando.
Stirling, Frank, Ft. Lauderdale.
Stuart, C. E., DeLand.
Svilokos, E., Stuart.
Swann, Tom B., Box 232, Winter Haven.

Taber, Mrs. Geo. L., Glen St. Mary.
Tait, W. Lacy, Care International Fruit Corp., Winter Haven.
Talbot, Dale, Vero Beach.
Tampa Morning Tribune, Tampa.
Taylor, C. H., Walton.
Taylor, Mrs. John S., Largo.
Taylor, Miss Margaret E., 1202 E. Ft. King Ave., Ocala.
Taylor, W. W., Emerald Land & Groves Co., Dade City.
Thomas, Wayne, Plant City.
Thompson, W. L., Lake Alfred.
Thornton, R. P., Tampa.
Thursby, Miss Isabel, Tallahassee.
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U. S. Phosphoric Products Corp., Tampa.

Van Clief, W. C., Winter Haven.
Van Sickler, C. B., Ft. Pierce.
Von Loesecke, Harry W., Box 83, Winter Haven.
Vielie, C. E., Davie.
Vining, Miss Sally J., Winter Haven.
Vissering, Norman H., Tampa Union Terminal, Tampa.

Wahl, John H., Attorney, Orlando.
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Wakelin, Mrs. Maud M., Tavares.
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Waring, W. L., Jr., Gen. Mgr., Lyons Fert. Co., Tampa.
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Waverly Growers, Inc., Waverly.
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Wells, W. G., Tavares.
White, Dr. Geo. R., 180 N. E. 82nd Terrace, Little River.
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Wilson & Toomer Fertilizer Co., Jacksonville.
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Winter Garden Ornamental Nurseries, Winter Garden.
Winter Haven Chamber of Commerce, Winter Haven.
Winter Haven Citrus Growers' Ass'n, Winter Haven.
Winter Park Land Company, Winter Park.
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Wolfe, H. S., Homestead.
Woods, L. R., Box 2714, Tampa.
Woolfolk, R. B., Box 892, Orlando.
Wray, Floyd L., Hollywood.

Yandre, E. W., Box 568, Orlando.
Yonge, J. R., Box 798, Ft. Pierce.
Yothers, W. W., Orlando.

Ziegler, L. W., Winter Haven.

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Berk, F. W. & Co., Inc., 420 Lexington Ave., New York City.
Barbour, Dr. Thomas, 130 Mass. Ave., Boston, Mass.

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Carus Chemical Co., Inc., LaSalle, Ill.
Chadwick, J. W., Benham, Ky.
Cleveland Public Library, Cleveland, Ohio.
Coit, Dr. J. Eliot, Vista, California.

Dierberger, Sr. Joao, Rua Libero Badero 20, Sao Paulo, Brasil.
Dierberger & Companhia, Rua Libero Badero 20, Sao Paulo, Brasil.
Dye, H. W., Plant Pathologist, Niagara Sprayer & Chemical Co., Inc., Middleport, N. Y.

Edison, Mrs. Thomas A., Orange, N. J.

Faris, T. M., Atmore, Alabama.
Friend, W. H., Weslaco, Texas.

Gribbel, John, 306 Bulletin Bldg., Philadelphia, Pa.
Henry, A. M., Care Pure Food Administration, U. S. D. A., Atlanta, Ga.

Laughlin, Mrs. Geo. M., Jr., Woodland Road E. E., Pittsburg, Pa.

McBride, J. N., Care Seaboard Air Line Railway, Savannah, Ga.
MacCarthy, H. P., Nueva Gerona, Isle of Pines, Cuba.

Meyer, Carl, 117 E. Fifth St., Cincinnati, Ohio.

National Sulphur Co., Suite 2710, 420 Lexington Ave., New York City.

Sachs, Mr. Ward H., 779 Virginia Ave., Atlanta, Ga.
Sachsenmaier, Henry F., Holmesburg Station, Philadelphia, Pa.
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Stauffer Chemical Co. of Texas, New York City.
Strain, Thomas H., Merchantsville, N. J.
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Tobacco By-Products & Chemical Corp., Louisville, Ky.
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Wight Nursery & Orchard Co., Cairo, Ga.

PROCEEDINGS

OF THE

FLORIDA STATE HORTICULTURAL SOCIETY

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Forty-Ninth Annual Meeting of the Florida State Horticultural Society

In 1937, the Florida State Horticultural Society holds its Golden Jubilee meeting in Ocala, the place of its origin. The Forty-ninth Annual Meeting in DeLand and Volusia County was a fitting approach to the Jubilee Period. DeLand has been the place of publication of the Proceedings of the Society since 1895. It is the home of H. B. Stevens, who has been active in the Society almost from the time of its organization and is one of its most enthusiastic supporters. The early memberships rolls show the names of Bielby, DeLand, Stetson, Dreka, Gillen, Hamlin, Johnson, Wilmshurst, Kingsbury, Shepherd and Wilson. In Lake Helen, lived Mace, Willison and Westlake. From Ormond, came Anderson, Amsden, Barr, Bacon, Knox, Bostrom, Carnell, Johnson, McNary, Murray, Price, Street, Stewart. In New Smyrna, there was Conner, Perkins, Hawley and the Nordmanns. Mr. W. S. Hart of Hawks Park (Edgewater) is now the only living member who signed the articles of incorporation of the Society in 1892 and was the first Secretary of the Corporation. He was later elected Treasurer and served in that capacity for thirty-one years. Another signer of the articles of incorporation was E. O. Painter, who was long a resident of DeLand. Mr. Painter was elected corresponding Secretary, later becoming Secretary, which office he filled until the time of his death in 1913.

This list of older members from Volusia County is by no means exhaustive, but serves to indicate that this Society may well feel at home in DeLand and Volusia County.

The Society held its Third Annual Meeting in DeLand in 1890, the two previous meetings being held in Ocala. Its Fifth Meeting was in Ormond in 1892. The Twenty-second Meeting was in Daytona in 1909, and its Twenty-sixth in 1913 in DeLand. Now after an interval of Twenty-three years, the Society again comes back to DeLand in its 49th year.

Program

The program of the 49th Annual Meeting was very comprehensive, touching upon many things of timely interest to the fruit industries in Florida. Messrs. Hamner, Daniels, Case, Phillips, McKay and Kirkland discussed problems of vital interest. Their talks are published in full in these Proceedings and we suggest that they be carefully read and considered. Every talk on the program was of interest and contributed to the high standard that the Society has maintained in its programs for many years. The entertainment numbers were largely furnished by the students and faculty of the John B. Stetson University, and were of high class and most enjoyable.

Meeting Places

The meetings of the Society were held in the Auditorium of Elizabeth Hall at the University. The Society is much indebted to President Allen and his associates for permission to meet here, and to those who furnished the floral decorations. It is particularly indebted to Secretary G. E. Gilliland of the DeLand Chamber of Commerce, who was active at all times in perfecting arrangements for meeting places and looking after the welfare of the members. Others active as hosts were Mr. F. H. Hammer, Mayor A. C. Hatch, Mr. E. H. Talton and Mr. R. J. Kepler. Mr. Kepler furnished the orange juice that was the popular drink throughout the meeting.

Institute Meetings

The Krome Memorial Institute held another series of its most interesting meetings on Wednesday, May 6th, 1936, in the Auditorium of the Chamber of Commerce. The meetings were well attended

and a very comprehensive program was given. The papers given at these meetings are published in full in these Proceedings. Dr. H. S. Wolfe of Homestead was elected Vice-President and presiding officer for the Institute for the year 1937. He succeeds Mr. Paul Hoenshel of Port Mayaca.

L. B. Skinner

A damper was cast upon the opening sessions of the Society upon hearing of the passing of Past President L. B. Skinner on the opening day of the meeting. Mr. Skinner served the Society as President from 1923 to 1928, inclusive. He always took an active interest in the Society and its deliberations and contributed liberally to its support. He was regular in his attendance at the Annual Meetings and was a leader on all occasions.

A Heavy Loss

The Society has suffered a further loss in the passing of its President, John S. Taylor, and 1st Vice-President, S. F. Poole, who died on August 15th and July 30th of this year. Both men died from heart attacks. Their passing came at an unfortunate time for the Society, as they were leaders in planning for the Golden Jubilee Meeting in Ocala in 1937. Their presence and help will be much missed.

The Society has had eight presidents in its forty-nine years of existence. Mr. Taylor is the third to die in office, the others being Dudley W. Adams, its first president, and C. T. McCarty, its third president.

Golden Jubilee

The Executive Committee will meet early in January, 1937, to set the date and perfect plans for the 50th Annual Meeting of the Society to be held in Ocala, the place where the Society was organized, in the Old Ocala House at 3:00 P. M. on April 10th, 1888. A gala affair is planned. Preliminary announcements will be made immediately after the Executive Committee meets. It is hoped that all will enter into the spirit of the occasion and help to make this meeting a grand success.

Frontispiece

We carry as frontispiece in this Proceedings a picture taken of H. B. Stevens and P. H. Rolfs during the meeting. Both have been long in the service of the Society, and have served it well.

PROCEEDINGS

OF THE

Florida State Horticultural Society

FORTY-NINTH ANNUAL MEETING

DeLand, May 5, 6 and 7, 1936

OPENING SESSION

President Taylor: The Forty-ninth Annual Meeting of the Florida State Horticultural Association will come to order. We will have the invocation by the Rev. W. E. Craig, pastor of the First Methodist Church of DeLand.

INVOCATION

Rev. W. E. Craig, DeLand

President Taylor: We will be favored with an organ solo by Professor Mathew Slater, of the Stetson Conservatory of Music.

Organ Solo.

President Taylor: We will now have an address of welcome by Mr. A. C. Hatch, Mayor of DeLand.

ADDRESSES OF WELCOME

Mayor A. C. Hatch, DeLand

President F. H. Hammer, Chamber of Commerce, DeLand

Dean Charles G. Smith, Stetson University

Mayor Hatch: Mr. President, Officers and members of the Florida State Horticultural Society, Ladies and Gentlemen: It is a pleasure on my part to tender you the greetings of our city. You are gathered here to hold your Forty-ninth annual meeting. This, in itself, speaks volumes for the splendid work and the personnel of your officers and members. DeLand is not only a citrus section, but a winter resort and an educational center. We consider Stetson University our most valuable asset, and cordially invite you to inspect this university. DeLand is the county seat of Volusia County, according to the latest census, Volusia shows a gain of over one

thousand who are gainfully employed in citrus growing. We have many attractions to occupy your time while you are here with us. We wish you to enjoy them in your own way. Our city is yours and anything that we can do for you will be done. Thank you.

President Taylor: We will now have an ardress of welcome by Mr. F. H. Hammer, President of the DeLand Chamber of Commerce.

Mr. Hammer: Ladies and Gentlemen: Before giving my few words in welcome, I have a gentleman on the platform tonight who has always been one of our civic leaders. He is a director of Stetson University and for years manager of the John B. Stetson Estate, and he has been for 49 years a member of the Florida State Horticultural Society. I am going to ask Mr. H. B. Stevens to arise and let us give him the glad hand.

Applause for Mr. Stevens.

Mr. Hammer: Folks, it is to me a real pleasure and a special privilege to be here tonight on behalf of our Chamber of Commerce and the business interests of DeLand; to welcome you people here and to assure you we want to make you happy. The work in which you are interested is, to say the least, highly commendable to every right-thinking citizen of our state; and, after all, what is of more importance to us than that which our soil produces?

Agriculture, horticulture and flower study go hand in hand, each with its own important part in our daily life, and it is unfortunate that more do not appreciate their true value. It is such meetings as this that serve to bring out to more of us its real importance. DeLand is indeed proud to have the privilege of entertaining you this year and her citizens wish that each and every one of you will return home, not only with a better understanding of your own organization, but with the knowledge that DeLand appreciates your visit and that all has been done to make your days here a real pleasure. Thank you.

President Taylor: We will now have an address by Dean Charles G. Smith, representing Stetson University.

Dean Smith: Mr. Chairman, Members of the Horticultural Society of the State of Florida, Ladies and Gentlemen: It is my pleasant duty to welcome you here, on the part of the John B. Stetson University. I assure you that the doors of the University are wide open to you. If there is anything we can do for you, please call on us. We are glad to welcome you, we hope you enjoy it here and hope that you will come back. Thank you.

President Taylor: The response to the addresses of welcome will be made by Mr. Waldo E. Sexton, of Vero Beach.

RESPONSE TO ADDRESS OF WELCOME

W. E. Sexton, Vero Beach

Members of the Florida State Horticultural Society, Ladies and Gentlemen: On your behalf, it falls upon me to thank the Honorable Mayor of this beautiful city for his words of welcome. (You see, I assumed there would be only one address when I prepared my speech.) In order that he may know to whom he has just handed over the keys to his city, I think I should tell him who we are, what we represent and for what purpose we are gathered. In doing this, I am speaking only for the citrus industry in the State of Florida. I have not tried to cover the Rose Society, the Institute annd the others, because I am going to brag a little for the citrus industry and can do it longer talking about this than about other things. Possibly when the Mayor comes to know you, he will want his keys back.

First, we are a group of people who work with nature and trick her and make her respond. We are producers of new wealth, we are a fearless band of gamblers. Many of us have come to Florida from every state in the United States, and many foreign countries. We gamble with the elements, we gamble with the insects, we gam-

ble with the fungus diseases in making our crop; we gamble with the politicians, we gamble with the transportation companies; we gamble with the markets and in many instances the cards are stacked against us, and the percentage in favor of our winning is small.

In spite of all these odds, we have pushed our industry up until it equals the return from all forest products, including timber, lumber and naval stores, and it is twice the value of all minerals and sea foods shipped from the state.

Our citrus industry represents a capital investment of a half billion dollars. Our average annual turnover in handling the crop we produce is around $40,000,000 a year. We grow, pick, pack and lift two or three times, close to 30,000,000 boxes of fruit each year, so you can see we have a big job. It takes a lot of hard work to run the show. At the close of each shipping season for almost half a century, we have stopped to get our breath, have declared a holiday from the routine work, and have made pilgrimages to different cities throughout the state to attend the Horticultural Society meetings. Our purpose is first, to renew old friendships and make new ones, in order that we may exchange ideas and discuss our problems with our neighbors; second, we want to acquaint ourselves with different sections of the state and learn the cultural methods that are peculiar to those sections; and last, we hope at these meetings to recharge our batteries, so that we will be more able to carry on and compete with the problems that will confront us another year in producing a bigger and better crop.

Ours are heavy dollars. They were earned with many backaches. We are accustomed to swimming in rough water and I don't know that I want to be responsible for the acts of this group with the easy sailing that you have promised us in your fair city for the next two days. So if you are in doubt as to our conduct, you had better speak now or forever hold your peace, for when we get started we are hard to stop.

Music by Men's Glee Club, of Stetson University—"Winter Song," "Mosquitoes."

Music by Girls' Trio—"Kentucky Babe."

Music by Girls' Glee Club—"Invocation to St. Cecelia."

Music by Male Quartette—"Steal Away."

Music by both Glee Clubs—"Listen to the Lambs," "Stetson Alma Mater Song."

President Taylor: I want to say this is the most wonderful Glee Club music I have ever heard, and I believe you will all agree with me. I wish I had language to properly express the appreciation due those splendid numbers. I will just say that we are grateful.

Now we will continue with our program, which will not be very much longer.

PRESIDENT'S ANNUAL ADDRESS

President John S. Taylor, Largo

It is customary for the President of the Society to deliver an address. I am going to be very short tonight; we have a number following in which I am sure you will all be interested, and I will not take very much time.

It is a genuine pleasure to meet all of you here in DeLand, on the occasion of the 49th Annual Session of the Florida State Horticultural Society. The great State of Florida is rapidly emerging into the spotlight of national and world-wide attention. Its beautiful beaches, forests, farms, groves, gardens, lakes, highways and cities have become so famous that millions of people are now attracted to the state each year. They come both winter and summer. They return, in many instances, to dwell permanently. It is our object to encourage every child and every citizen to assist in making the state more attractive and more beautiful for all, those who live here, and those who come to visit here.

And while there is much to be said along economic lines, much of geographical significance, and even more of political and historical prominence, we of the State Horticultural Society have taken it upon ourselves to campaign for those great natural resources of aesthetic and practical value which contribute so much to the beauty and attractiveness of Florida.

In many instances we see the beautiful parks, water fronts, boulevards and gardens of well planned cities which have sought, as an objective, the beautification of many acres and many miles that should rightfully be preserved as common property for the heritage of the coming generations. We see upwards of four hundred thousand acres of beautiful citrus groves, well kept and bearing delicious and healthful fruits. We admire the celery lands, the berry farms, the vegetable plantations, the fields of grain, the farms and the great chain of highways connecting and binding us together into a commonwealth of neighbors.

But much remains to be done even yet. Permanent thoroughfares need to be widened, waterfronts need to be preserved for the common good. Parks and boulevards need to be beautified and made more attractive. Many neglected groves and fields need attention, and above all, we need a continuation and a revival of interest in home beautification by *every resident family* in the State of Florida.

A trip through the famous Jungle Gardens, the Cypress Gardens, the Floral Gardens, and other parks, reveals hundreds of tropical and semi-tropical shrubs, plants and flowers which can be grown in Florida. The natural jungles, hammocks, everglades and uplands no doubt hold the secret of many more. I mention these things only to point out the possibilities of beautifying this land which the great Spaniard, Ponce de Leon, who was the first white man to see its beauties, named "The Land of Flowers."

Many valuable papers and discussions will be presented throughout this session, to reveal how we can improve the appearance and the value of our homes, our cities and our farms, thus making us a happier, better contented and even more hospitable people. I sincerely hope that all of you who are enjoying the hospitality of the remarkably beautiful city of DeLand, will also enter wholeheartedly into the enjoyment and the spirit of the program of the Society in this its 49th annual session.

We will now have an illustrated lecture, "Gardens of England," by Rev. John Everington, of Clearwater.

(There was no manuscript submitted to cover this address.)

MAJOR PLANT FOOD ELEMENTS FOR CITRUS

R. M. Barnette, Chemist
Florida Agricultural Experiment Station

There are several general statements about plant food elements which are pertinent to a conference on the "major plant food elements." Perhaps the most important point to keep in mind is the fact that the specific action of any plant food element is dependent upon an adequate available supply of all other elements essential for a healthy plant under specific growth conditions. This fact makes difficult a sharp delineation between elements to be considered "major" and those to be considered "minor." However, in order to draw a line, the elements carbon, hydrogen and oxygen which are obtained by the plant from air and water and build up the greater portion of the plant structure have been disregarded, and the elements nitrogen, phosphorus, potassium and calcium considered the "major" plant food elements. There is some justification for considering these elements as major in that they occur in relatively high percentages in plants, and their compounds form the bulk of fertilizing materials.

The beneficial action of these elements is de-