

of frozen oranges, it seems that the most practical standard should be based on the juice content. With this restriction it is seen that the

growers whose oranges have been affected by freezing make at least a partial saving without putting any bad fruit on the market.

FOUNDERS AND FOUNDATIONS OF FLORIDA AGRICULTURE A Serious and Frivolous Study of Men and Measures

P. H. Rolfs, Gainesville

President Taylor of the Florida State Horticultural Society; Ladies and Gentlemen:

I am proud to stand before you today, to contribute in some degree, however small, to your enjoyment of this occasion. We have each come here to add our mite and take away something inspiring and valuable. I have never missed a meeting since the Ormond meeting in 1892, when I have been in the State. I have always carried away more than I have contributed. The noble, splendid men and women of the Florida State Horticultural Society have always been an inspiration to me.

The preparation of this paper has been a great pleasure to me. Pleasures are contagious. I hope that you will enjoy hearing it a fraction as much as I did preparing it.

FRUIT GROWERS LONG LIVED

Last year the American Fruit Grower announced the official formation of the Fifty Year Club, to commemorate the magazine's Golden Jubilee. The Club consists of persons still living who had dedicated fifty years personal service to the business of fruit growing. Fifteen of the 181 charter members resided in Florida. They are: (1) J. B. Booth, Tavares; (2) A. H. Brown, Manatee; (3) S. P. Brantley, Clermont; (4) Joe Carson, Babson Park; (5) J. C. Chase, Winter Park; (6) J. B. Curtis, Orange Heights; (7) B. M. Hampton, New Port Richey; (8) W. S. Hart, New Smyrna; (9) T. A. Hux, Tavares; (10) A. S. Matlack, Sorrento (since deceased); (11) John B. Oberholzer, Esmeralda; (12) L. B. Skinner, Dunedin; (13) H. B. Stevens, DeLand;

(14) E. L. Wartman, Citra (since deceased); (15) W. D. Yonally, Grand Island.

Theodore Meade, Oviedo, and possibly one or two others should have been included.

You see, I am not quite old enough to be among the immortals; in other words, I am just middle aged; in my opinion. Any one younger is not quite middle aged, really not quite old enough to be taken seriously.

HORTICULTURAL LEADERSHIP

A second page of the American Fruit Grower is dedicated to Fifty Years Horticultural Leadership. This contains thirty-five who were too young to be in the Jubilee Club; twelve of these have had a marked and potent influence on Florida Horticulture. They are: F. V. Coville, R. H. Dorsett, David Fairchild, B. T. Galloway, L. O. Howard, H. Harold Hume, Charles L. Marlatt, P. H. Rolfs, William A. Taylor and H. J. Webber. Fairchild, Hume and Rolfs reside in Florida.

F. V. Coville's efforts in domesticating the blueberry are a notable piece of work. P. H. Dorsett saved the Subtropical Laboratory when it was being dismantled. David Fairchild has an undying monument in the introduction of thousands of the plants we are growing. B. T. Galloway, in organizing the Bureau of Plant Industry, fought to have the crop recognized as the unit on which investigation should be centered. He lost, but now the Department of Agriculture is attempting a second time to organize on this basis. L. O. Howard, as head of the entomological work, opposed the co-operative ideal and won. Both, as heads of their respective labors, did

splendid work in their own way, for Florida. Hume and Florida Horticulture are synonymous. Marlatt has done splendid work for Florida in pest regulatory work. P. H. Rolfs has been with you always. Taylor has contributed technical descriptions of numerous of our fruits. Webber ushered in a new era for us in combating citrus pests. With Swingle he started citrus hybridization.

THIS ADDRESS, SERIOUS AND FRIVOLOUS.

This brief paper is a sort of "Who's Who and Why, Among the Near Great in Florida Horticulture." Serious and frivolous. "Lest we forget" the forgotten men among the makers of Florida Horticulture. The historian will be able to reconstruct a fair picture from our Annual Proceedings and other contemporary publications. There are many side lights and unrecorded incidents, hunches, or whatever you may call them, that never got into print. Often, apparently irrelevant incidents determine the success or failure of an entire industry. In a measure I am interpreting the meaning and effect of some movements not recorded on the printed page. Some of the glimpses I am recording, I hope may be useful to an historian, to enable him to construct a clear picture of the history of Florida Horticulture and Horticulturists. It is largely a reminiscence of forty years in Florida Horticulture. Secretary Floyd asked for it: So here it goes.

WHO MADE FLORIDA GREAT?

I am not unmindful of the very important role played by the transportation interests in augmenting volume. I am not unmindful of the part played by the great fertilizer manufacturers in augmenting production. I am not unmindful of the splendid and untiring labors of civic organizations in securing the presence of winter visitors. I am not unmindful of the nurserymen who made it possible to plant extensive groves of the finest varieties. All of these could not have produced a Florida without the *orange tree*. The orange tree put steamers on the St. Johns River. It was the lodestone that drew travel to the Tampa Bay; to the Ponce de Leon; to the Royal Poincianna.

The orange tree, always beautiful, always inspiring. The delicious perfume of the bloom. The delicate waxy petals are the ambition of the bride. The lush spring and summer growth fills the grower's heart with contemplation. The balls of gold foretell the harvest. When the Lord created the orange tree, He called it a day. He has not attempted to improve on it.

Reminiscences easily become "remi-nuisances." "Reminiscences are the nurseries in which children grown old, play with broken toys."

If you are not mentioned in these ramblings, that is your fault for being alive, and if you happen to be among the "dead ones" you would be overlooked anyhow.

THREE PERIODS

This paper will be replete in anecdotes, irony and sarcasm, possibly. For tonight's purposes we may divide Florida Horticulture into three periods: (1) B. C. (Before Coming); (2) A. D. (After Doing So); (3) Cenozoic (The Age of Voluminous Printed Matter). The first period (B. C.) ended in 1891.

All the books published on Florida Horticulture up to that date can easily be held between my thumb and fingers. This period found three young men who were the sole representatives of the Bureau of Entomology, the Bureau of Plant Industry and the Florida Agricultural College. These organizations now have a hundred or two hundred men and women employed in Florida. The State Department of Agriculture was timidly knocking at the door of Florida Horticulture for admission. H. G. Hubbard, Entomologist for the Division of Entomology, had just invented the emulsifying of kerosene and soap. (For which someone else got the credit.) Swingle had been sent to the state by the Division of Plant Industry, to subdue orange blight—through the influence of Senator Platt of New York, whose wife owned a grove near Leesburg, badly afflicted with that disease. Your speaker was Entomologist and Botanist to the Florida Agricultural Experiment Station and Professor of Natural Sciences in the Agricultural College, which studies ranged from Entomology, through Geology to As-

tronomy. "There were giants in the land in those days."

The A. D. period merged rapidly into the Cenozoic period which was marked by voluminous and splendid publications. One author alone, Hume, has already published an armful of books and will publish another armful by the time he reaches "middle age."

TWO GROUPS

For the convenience of this paper and your comfort, I have divided the forgotten horticulturists into two major groups—those I have not known and those that I have known. It is this latter group that we will pass in review tonight.

ENTER PRAGMATISTS

In the B. C. period all necessary problems in orange culture had been solved. An authority says so, in so many words. The Florida Horticultural Society was a mighty youth who had just entertained the great Pomological Society, 48 years ago. Adams, Rev. Lyman Phelps and W. S. Hart were among our outstanding leaders. We youngsters were horticultural pragmatists. We knew nothing about subtropical horticulture—and knew that we did not know. We were from Missouri and had to be shown. We dared to call on the wise old heads to prove their theorems. Mind you. We adapted ourselves to the environment but basically remained pragmatic. Dudley W. Adams made caustic and cynical references to us in his annual addresses. Rev. Lyman Phelps, the vitriolic, and he was a master of rhetoric, squelched an attempt to extend a cordial word to the Experiment Station. W. S. Hart could always be depended upon for kindly constructive criticism. He was frequently nettled by our youthful incredulity. Sometimes he proved us wrong.

PROVE ALL THINGS

In 1893 the presence of the San José Scale at DeFuniak, was determined simultaneously by Prof. H. G. Hubbard for the Bureau of Entomology and by myself for the Experiment Station. The Experiment Station, under Director Clute, started out to exterminate the pest. It was a losing fight. During the latter part of the next

year a report came to me that trees in a certain peach orchard were quite free from the scale. Our field notes showed it was one of the first and worst affected. I spent months, at intervals, seeking the natural cause. Locally the people of DeFuniak Springs ascribed it to the wonderful climate. It looked to me as if the dictum of the spiritualist was going to come true. He affirmed that if we forgot all about the San José scale, there would be no scale. That it was all in our minds. (See also F. P. Henderson, under Deciduous Fruits.)

Chemical Analysis as a Guide. Analysis of the soil as a criterion for productivity was then in vogue. In the late 90's a private chemist advertised his ability to analyze the soil and predict therefrom whether the soil would produce a remunerative crop or not. Even so late as in the present century, a few were using this as a criterion. (The Hilgard tests for soil fertility). I remember one case where the analysis had been unavoidably delayed for some weeks. When the report on the analysis was made, the scientist remarked: "Absolutely unsuitable for any agricultural purpose." The Dade County tomato grower who paid for the analysis had already banked \$150.00 per acre from that land. In those days the "whisper phone" functioned from Cutler to DeFuniak. This incident put all chemists in "A" grade in a large class of theorists.

Bean recommended Eureka insecticide as a cure for orange blight. He claimed to have had effective results from its application in liberal quantity. It was a double barreled recommendation. If it was adopted it would be highly remunerative and also would rid the commercial men of an annoying government plant pathologist. (See also Bean and Swingle, under Citrus.) So far as I know the suggestion has never been followed up. I wonder if there might not be something in it. One never can tell.

Way along in the '90's when everything was in a formative state, we were discussing the best kinds of clippers for citrus. Hollingsworth from Polk County gave us a great tirade on pulling oranges and grapefruit. He was so overwhelmed by the clipper men that he quit the meeting in a fury and said some words more forceful than

poetic. He was vehement for pulling oranges and grapefruit and got properly "sat down on." He went home and published his own horticulture.

Now in April, 1935, comes the surprise. Prof. Winston, Horticulturist, Department of Agriculture, announces that pulling grapefruit instead of clipping it gives less stem-end rot. Prove all things!

In 1889 a bulletin, lavishly illustrated, containing much valuable information, was prepared by Dr. J. C. Neal. For want of reference literature he erred; classifying the root-knot worm as *Anguilula* in place of *Heterodera*. Scientists accorded him full membership in the "Ananias Club." Investigation of the effect of *Heterodera* was "taboo" for a whole generation. Along comes a young scientist and rediscovers that *Heterodera* does cause a citrus disease. Prove all things!

THE FOUNDERS WERE INDIVIDUALISTIC

The makers of Florida Horticulture were strong individualists as distinct from collectivists. They would co-operate with the scientists as individuals to the "nth" degree, but as a community or an organization they "fought shy" of doing things collectively. This made them and the industry easily subdued by the transportation interests. It laid many of the growers open to exploitation for private gain.

The epoch making discoveries and progress have been made by individuals rather than by groups working collectively. This underlying motive is strong in the easterner as distinctive from the westerner. The easterner raises the great bulk of deciduous fruits in the United States but it is the Pacific Coaster that distributes fruits to the cities and hamlets of South America and competes on the European markets with all comers. He even competes with the countries south of the Equator during their shipping season for citrus fruit.

The leaders in Florida Horticulture were drawn almost entirely from the east. Adams, Vermont via Iowa; Taber, Maine; H. S. Hart, Vermont; F. G. Sampson, Massachusetts; Rev. Lyman Phelps, New York State; later some recruits came from the West; Swingle and Fairchild from Kansas; McCarty and Rolfs from Iowa; Webber

from Nebraska; McQuarrie from Scotland via Indiana; Krome from Illinois. Those of you who heard Dr. Fairchild's masterly address yesterday before the Krome Institute, will know at once that he was running true to form.

FATE—WHO IS SHE?

Fate is a determining force whose motivating incidents are not clearly delineated. For today's allegory we may represent her as a lovely young secretary, playing "solitaire"; allocating cards in the files of human affairs. There is nothing supernatural intended; although each one of us has such a handover inherited from countless generations of ancestors. This submerged superstition in our subconscious plays for us an infinite number of pranks. I have a hunch, I play it, I am successful, it is permanently filed away in my subconscious. I play on a hunch, it proves negative, my subconscious erases it. Fate is merely the outward expression of man's adaptation to his physical and social environment.

During the late '80's we had political and social upheavals. The assassination of President Garfield; depression; over production; election of Cleveland, a free trader; bitter strikes of railway employees; other social disturbances. In the early '90's the U. S. troops were called to protect mail in transit. It was a period of social readjustment. Enter citrus industry.

Fate and Men. She drew her cards, located Dudley W. Adams at Tangerine; Rev. Lyman Phelps at Sanford; the Reasoner Brothers at Oneco; E. H. Hart and E. S. Hubbard at Federal Point. They were the strength and builders in the citrus industry. Taber at Glen St. Mary to propagate deciduous fruits. They were all strong individualists—had to be, to carve a competence out of a wilderness. Their names are luminous in the annals of our Horticultural Society. Scores of others, more able, wealthier, became luminous and then faded. Not these.

In '92 I discovered that a certain Sclerotium producing fungus was the cause of extensive tomato blighting. In '93, my Director of the Experiment Station permitted me to absent myself from college classes to perform some field experiments, but there was no money to pay trav-

eling and other expenses. In my experiments at Grand Island, potassium sulphide and ammoniacal copper carbonate proved most successful and economical.

Now Fate slips in. Saccardo, the world renowned Italian mycologist, whom I had never seen nor even corresponded with, called the fungus *Sclerotium Rolfsii*!!! Think of it! Devoting my life and energy to protecting plants against diseases and then have it linked in literature and possibly in history with one of the most omnipresent pests in the whole tropical plant world!

Fate and a City. She plays her pranks with cities as well as with men. Archer was once the center of extensive peach and truck growing. She produced such notable men as Dr. F. G. Pearson, President of the National Audubon Societies; Dr. A. L. Quaintance, recent Assistant Chief and often Acting Chief of the Bureau of Entomology; the late Sam Fleming, Assistant Director of the Florida Experiment Station. All three of these hunted birds' eggs there. Kerr, extensive trucker in eggplant, cucumber and snapbeans. I visited him because he was the "most extensive eggplant grower in the State." A. F. Wyman, who carried this knowledge to the Manatee. Dr. J. C. Neal, second Entomologist to the Florida Experiment Station. Rev. Jas. P. DePass, second Director of the Experiment Station. What was it that made Archer become luminous and then fade out? I have often wondered. Some LeConte trees, about forty years old, are still flowering and fruiting. Climate and soil are favorable.

Fate and Politics. Overtime remote incidents have had a profound influence in the development of our Florida Horticulture. These are likely to pass unnoticed and the results are ascribed to Fate. Some of these were important, if not determining factors, on our Horticulture. I have already referred to the pioneer horticulturists as coming from the individualistic East. For the most part our leaders were Republicans and hence unclear in the eyes of our Democratic Legislature. Hearty and sympathetic co-operation did not exist. A sympathetic Republican U. S. Secretary of Agriculture was checkmated by our Democratic Senators and Representatives. The freetrade Democratic administration threw our

truck and tropical fruit growing into the doldrums. These influences were remote and yet exiled many an able Florida Horticulturist to the tropic isles.

OUR HORTICULTURAL CROPS

The distribution of Florida horticultural crops has been more or less regional. This was more by fortuitous sociological circumstances than from physical causes, if we recognize transportation as a social condition. Inadequate distribution of the product has often been an impediment. The introduction of the automobile and truck has relieved this situation to some extent.

One does not have to seek far to find localities greatly favored by nature which, nevertheless, have made dismal failures of an appropriate crop; another locality far less favored by nature making an excellent success of the same crop. Why?

A GENERAL ASPECT

In this section I want to discuss some of the factors and persons who influenced the development of Florida Horticulture in a general way rather than through some particular horticultural crop. Some factors and persons have had a very profound influence on our horticulture and that were broader than horticultural.

My deductions have been drawn from forty years experience as an active member of the Horticultural Society. Forty years of marvelous progress in human affairs. By studying the ultimate element, the individual, we arrive at a clearer understanding of the "mass behavior." It is a want of "collectivism" that has made so difficult an orderly development of Florida Horticulture. Our individualistic behavior has made us especially vulnerable to "booms and depressions." The northern portion of Florida was populated mainly by individuals from other southern states. It made them exceedingly vulnerable to dominance for private gains, hence the dying out of peach and pear production. (The transportation and sales dominance.)

During the '80's and early '90's we had a reign of political brigandage. The office was secured for private gain; not always; there were notable and noble exceptions. No wonder the staunch men composing the Horticultural Society would

have nothing to do with anything that savored of politics. Many times we erred in failing to support measures that would have made for a more orderly horticulture. But more frequently we did well in withholding support from schemes that appeared to be sound but later proved to be detrimental to our horticulture. Rarely did we as a Society, "pull a chestnut out of the fire." Individually, frequently.

A hundred places in the state might be named that were "boomed" dry and then left stranded; some returned to the "primeval forests" from which they had been wrested. Scores of other places have grown and prospered without ever having been "boomed." Why?

NINE LEADERS IN GENERAL

In commenting on the individuals who were directly or indirectly actors in the development of our horticulture, my motive is to make a record of their doings. I have only the kindest feelings for their memory. Nor do I claim any superiority of intellect; a superiority complex; my "inferiority complex" has often been an inhibiting factor. No one else in the forty years has had a better opportunity for a "close-up" of the horticulture from Pensacola to Key West, so intimate contact without being a part of it. A sort of airplane reconnaissance.

PERRINE, HENRY. He had gotten a grant of land from Congress on the Keys and mainland, far south of Miami, in the early days of the last century. His assassination by Indians cut short a noteworthy project. Some of the plants he introduced maintained themselves into the twentieth century. In one of his reports he said: "The sterility of the soil is made up for by the fertility of the atmosphere." (Quoted from memory.) Perrine did not realize that he was the precursor of a numerous progeny of atmospheric boosters.

KOST, J., M. D., LL. D. Director of the Experiment Station, probably from 1888 until about Jan 1st, 1889. There seems to be no definite record of his having been elected or discharged, but his name occurs on Bulletins 1, 2 and 3. I had the pleasure of meeting him at least once, in 1892, I believe, during the meeting of the American Association for the Advancement of Science. The

general reputation among my acquaintances at Lake City in 1891 and 1892 was bizarre; more adapted to an adventurer than a scientist. He had secured a charter from the Legislature to establish a private institution at Tallahassee under the name of the University of Florida. A brick two-story building, looking very much like a residence of some twelve fair sized living rooms, was repeatedly pointed out to me as Kost's University of Florida. From some printed matter that came into my hands, it would seem that at one time three or four students in medicine had been enrolled.

He had made a collection of fossils, mainly from phosphate mines, which he took east with him upon leaving Florida. These arrived at their destination in a badly broken condition. Through his astuteness he was awarded a considerable damage from the transportation company, by the court. This was most remarkable for that day. He left in a shed a model of a geologic turtle shell, some ten or twelve feet long and maybe six or seven feet broad. My, but that was a whopper!!!

Well, when I met the doctor and had a chat with him, he proved to be all that the Lake City friends had promised "and then some." I must have been a regular life-saver to him, with all of that bile pent up in his system, he must have been at exploding pressure.

Now comes the astonishing note, for in "Science News Letter" for March 30, 1935, it is stated, "There were marine turtles over ten feet long in the North American inland sea, 90 million years ago." Maybe the Doctor was not as batty as we thought.

Bulletins Nos. 1, 2 and 3, published with Kost's name as Director, and No. 4, the first published by the Rev. Jas. P. DePass as Director, showed able scientists as contributors and presumably on his staff. Col. J. N. Whitner, Agriculturist; William H. Ashmead, Entomologist; A. H. Curtis, Botanist; J. M. Pickell, Ph.D., Chemist; George Troup Mexell, M.D., Veterinarian. A list of unusually able men for an Experiment Station staff of that day.

DEPASS, REV. JAS. P., Director of the Florida Experiment Station from 1889 to 1893. A South

Carolinian, he brought with him the proverbial pugnacity and political astuteness.

How he became Director: When the time for nominations to state offices was approaching, he announced for State Superintendent of Public Instruction. The incumbent wished to succeed himself but saw a bitter campaign ahead. He was Ex-Officio President of the Board of Trustees for the Agricultural College. Friends of the Reverend gentleman intimated to the incumbent that the matter could be smoothed out by making the Rev. DePass Director of the Experiment Station with an equal salary. That solved the difficulty and only one candidate for State Superintendent was up for nomination.

He was bold and aggressive, pugnacious, lacking in scientific training and practical experience. Apparently none of the staff that had functioned under Dr. Kost continued in service excepting Dr. Pickell and Col. Whitner.

The period up to 1893 was a hectic one for the College and for the Experiment Station. And yet some good agricultural men, like Dr. A. L. Quaintance and Sam Fleming, arose. Other figures like Rear Admiral Hutch Cone and Congressman Joe Sears have given good accounts of themselves.

CLUTE, DR. OSCAR, M. S., LL.D. President of the Agricultural College and Director of the Experiment Station, 1893 to August, 1897. He came to the state the best equipped man by training and experience that occupied that dual position. Before coming to us he had served his Alma Mater, the Michigan Agricultural College, as President and Director. He came in the prime of life and health. He left completely broken and died only a few months later. He was of pure Dutch stock and so killed himself licking the other fellow. Politics could not down him, but the "whisper-phone" inflicted a mortal wound.

The original, life-tenure and self perpetuating Board of Trustees proved to be unsatisfactory and was abolished. The new Board of Seven, all appointed by the Governor, contained such eminent men as W. D. Chipley of Pensacola, Judge Gwynn of Sanford, Dr. Stringer of Brooksville. Their first acts were sufficiently sensational. They elected Oscar Clute, a Michigander, over "sixteen

native sons." Dr. Clute at once set out to put the College and Experiment Station in order. He aided the West Florida deciduous growers in their contest with the San José scale; he aided the South Florida tropical fruit growers at Ft. Myers (the East Coast was still largely homestead lands). His experiments transformed the velvet bean from an ornamental into a forage plant and a cover crop. He sat as referee, on the rostrum at the Gainesville meeting of the Florida State Teachers' Association. In short, he vindicated the new Board completely.

To me it was a great inspiration to work for and with such a Director and such a Board of Trustees. In 1905, a radical readjustment occurred by the enactment of the Buckman Bill. (See Wartman.)

BRYAN, MILT. During the transportation tyranny, industries and communities were suffocated. Milt Bryan from Lake County and Chairman of our first Railroad Commission, believed that the shipper had some rights. They could not smother Milt Bryan, so the "interests" had the Commission abolished. Later the "square dealers" created a second Commission that has functioned to the present. While he lived in Lake County, I know Bryan only in passing; later in Osceola County I had the pleasure of visiting at his home. Sturdy, honest to a fault, a man of clear understanding of the needs of Florida and about twenty years ahead of the time in which he lived.

The best thing that he did for Florida was to raise a family of worthy sons and fine daughters. Son Will was elected to the U. S. Senate, but died from typhoid fever soon after. Son Nathan was Chairman of the Board of Control during the turbulent times when our system of higher education was being reorganized. His keen judgment and masterly understanding of Florida law successfully guided the Board of Control through that difficult period. The present greatness of the University and the splendid College for Women, are monuments to his untiring efforts. (See also, Wartman, under Citrus.) Modest, unassuming and retiring, he was always embarrassed when merited honors were thrust upon him and always enjoyed it immensely when others who merited it,

received applause. He could not do otherwise; it came to him by inheritance and home training.

To my mind, Nathan Bryan is the ideal of a statesman and judge.

POWELL, G. HAROLD. With his two young assistants, Lloyd Tenny and J. B. Rorer, he made a visit to the state about 1903, ostensibly to study citrus growing, really to see what collective co-operation he might expect from the Florida citrus growers. The Bureau of Plant Industry, B. T. Galloway, Chief, had just organized a systematic study of the citrus fruit problems. In 1909 I visited the Pacific Coast and saw a co-operative packing house, the first established, dedicated to the successful work of Prof. Powell, although he was still living.

His work had a far reaching influence in shaping the collective fruit business on the whole Pacific Coast. One finds Pacific Coast apples and pears for sale in almost every hamlet and town in Brasil. But never a one from the individualistic East.

We missed a good bet when we passed up G. Harold Powell.

GAITSKILL, S. H. After the '94-'95 disaster, S. H. Gaitskill planted a hundred acre orange grove for the Elder Dempster Fruit Company, at Port Antonio, Jamaica. I saw the grove in 1901. The trees had made magnificent growth, but no fruit had been shipped. Too much moisture and too frequent rainfall; oranges and grapefruit need a period of retarded development to produce abundant bloom and to hold the newly set fruit. Mandeville, within walking distance, in a rather sterile, dry region, produced quantities of excellent fruit. The London Office judged that all Jamaica was a good citrus producing region.

Gaitskill was a good orange grower, an excellent truck grower (by necessity), and at heart a livestock man. He was a Kentuckian, so of course, loved livestock.

He was a powerful leaven for diversification in Marion County. I enjoyed his frequent and unobtrusive visits to the Experiment Station and Agricultural College when they were in a formative state. Many of my colleagues were irritated by his rapier like sarcasm. It did a great deal to keep

our specialists from going off on visionary tangents.

HASTINGS, H. G. In a modest way he started a seed business at Interlachen. He also started a paper called the "Ruralist." Both were prospering nicely when ill-advised legislation made it imperative that he move out of the state. The legislation was intended to curb some spurious seed and plant businesses that had sprung up, but it overshot the mark and hit also legitimate and honorable business. A little more care in drafting the legislation might have saved this meritorious business to the state. At the time of his transfer, he was Secretary to the Horticultural Society, which guarantees that he was doing a straight business. He has made a marked success of his business in Atlanta, Ga.

PAINTER, E. O. A fine leader, an excellent organizer, a sound promoter. The life of the Horticultural Society. A Philadelphian by training and probably by birth. Although a Baptist by profession, he was a Quaker by nature. In my long and intimate association with him, I never heard him utter an unkind word about others.

He never failed to carry off some pleasing stunt at our Annual Meetings. One of the best ones was our visit to Cuba, after the first Miami meeting, in 1912. His aids to horticulture were many and unobtrusive. He provided the money which enabled Professor Blair to install the first four tanks for the lycimeter at the Experiment Station. They are still functioning.

His will provided for the publishing of a book on truck pests and diseases by the Experiment Station. He was the one commercial man in the state who used the Experiment Station to advance horticulture rather than to promote sales. Only a short time before his untimely departure, we visited a cantaloup field in Marion County where the fertilizer had given disappointing results. My judgment was that the fertilizer was at fault. Painter settled up in favor of the truck grower. Checking up later, it was found that by an inadvertence, the truck fertilizer had been dispatched to a cotton planter in Madison County and the cotton fertilizer had been shipped to the cantaloup grower. "Q. E. D."

Painter was a printer by profession, a citrus grower as a hobby and a fertilizer man as a di-

version—I almost said by accident. He experimented with “chemicals” on his own young grove; results most pleasing and economical. Neighbors got him to order for them. Presently he had built a lean-to shed and provided a shovel; a mixing plant in embryo. The project being based on field results, grew amazingly, beyond the capacity of DeLand. Jacksonville was the logical headquarters. By that time the “Florida Agriculturist” plant grew into the E. O. Painter Printing Company.” This he left in competent hands; it is still functioning. An ordinary man would have regarded it as a life’s ambition fulfilled.

Speaking of printing, that reminds me of the many deserved compliments that have been paid to our unique printed Proceedings. Printing is and always has been, a bugbear, passed up to the Executive Committee, fortunately.

On the way to Pensacola, for our Fifth meeting, this was seriously discussed. Means were the obstacle. W. S. Hart had taken extended long-hand notes of the previous four meetings and promised to meet Adams and write them up fully. At Pensacola I gave a lecture on insects, illustrated by stereopticon. That clinched the matter. The Proceedings must be published. An informal committee waited on our Secretary of Agriculture, Wombell. The Hart and Adams resumé and the papers read at Pensacola were printed. The leaders were not pleased. It had cramped their style.

Painter steps in. He offers to print all the papers in the “Agriculturist,” then lift the columns and assemble them. He offers to do this charging only for the material used and additional time required. A number of more affluent members contributed five and ten dollars each. Presto! The thing worked. The style has been retained, and the same printer. It is the most pleasing and easiest read of any horticultural society proceedings that have come to hand.

The Ethelwold episode is completely forgotten, save by the “ancients.” Near the middle of the '90's we were suffering from “over-production.” Optimists put the orange crop at five million boxes.

Painter aided and abetted a movement by the orange growers to charter a ship and send a solid carload of oranges to Europe. The finest and most

advanced piece of co-operative work done by Floridians. As a trial shipment, the only one, it was a great success.

FATE drew a card; filed it. The Arctic Circle burst open. A blizzard escaped. Cold chills went down the backbone of the North American continent, lost itself in the wilds of Mexico and Cuba. Rumors said that it snowed in Cuba; the flakes melting before reaching the ground. The citrus industry was thrown into confusion.

Painter’s untimely and entirely accidental passing robbed the state of a staunch promoter and the Horticultural Society of a profound stimulus. The rest of us had to carry on, but the vacancy still remains. The guiding mind had ceased to function.

KROME, W. J. Neither the history of Florida Horticulture nor the horticulturists of Florida will give him the credit for the determining role he played during one of the most critical periods—the citrus canker fight. The progressive people of Dade County fought the insidious canker to a standstill without either state or Federal funds. The motivating force was collectivism—the inspiring force was Krome.

The physical difficulties and litigations gave Krome a clear insight into what a plant quarantine act must contain and what funds would be necessary for its successful operation. It taught him where to look for support and what obstacles would have to be overcome.

Krome was raised in Illinois, hence a collectivist and did not know it. He was a trained and practised engineer; hence his straight thinking. He did not, like the rest of us, have to unlearn a lot of text-book stuff “that was not so” in horticulture. He was not a lawyer and hence could think and write without “where-ases,” “afore-saids” and “before-mentioned.”

He wrote the Plant Board Act and the Legislature approved it. He wrote the Plant Board rules and the Board judged them to be good. The Plant Board law and its rules have stood the test of the Supreme Court. Krome told me that the magnitude of the appropriation so overawed the Legislature that they did not study the Act; passed it as written. Actually it was so logically and scientifically written that it was recognized as a masterpiece.

Do not for a moment assume that I say that Krome did all of this individualistically. He was not an individualist; he did more than his share; and others went to the limits of their ability and opportunity. He brought all of the elements into alignment. He saw more clearly than anyone else the intricate interrelations and foresaw emergencies before they arose. Krome was acting as a private individual with no ulterior motive save the prosperity of the state.

In formulating the law and rules, Judge Price gave whole-heartedly of his time. After the Plant Board Act became a law, Krome, Tenny and Rolfs became the Advisory Committee to the Plant Board until a Plant Commissioner could be employed. The able Wilmon Newell demanded that this committee continue to function, as a condition to his acceptance of the commissionship.

To Krome belongs greater credit than to anyone else. He repeatedly denied this; he would point to someone else who saved the day. But Krome had already seen to it that the man would be there when he was needed.

(See also McQuarrie, under Deciduous Fruits.)

TRUCK GROWING

Truck growing has always been a tolerated step-child to the Florida Horticultural Society. Our first President, Dudley W. Adams, used the epithet, "Old squash head from the Manatee" in referring to a truck grower from that section. Following the winter of '94-'95, many a citrus grower debased (?) himself by truck growing in order to rehabilitate, but not Dudley W. Adams. He was a citrus grower or nothing. Many a citrus purist through adversity was converted to a program of diversification, most of them have "fallen from grace."

The whole evening might be devoted to romancing on truck growing. How a good lady made so much profit one year on Irish potatoes that she had to sell her farm to pay the income tax the succeeding year. How old Portuguese Joe, a cook, was marooned on a desolate island south of Jensen by an angry sea captain. How he homesteaded, grew snap beans, was offered six thousand dollars for his land and refused. Joe told me that he knew how to grow beans, but did not know how to take care of so large a fortune.

Joe was wise. He said: "Nao sell nao." The county attorney, in settling up the estate of \$15,000, found a daughter in Portugal, living near penury. If the story were properly polished up, it would make a prize winning romance.

How an agricultural writer in the late '80's proved conclusively that Irish potatoes could not be grown in Florida and especially not at Hastings. Last year Hastings shipped nearly two million bushels.

How, toward the end of the bicycle era, dwellers in two room shacks rose to the opulence of automobile owners and were on the roll to pay income tax.

There is not a county in Florida where climatic conditions are prohibitive of remunerative truck growing. The inhibiting factor is sociological; in this is included transportation and competent labor during rush seasons. Places in which truck growing has been highly developed are not always the best places climatologically, nor always on the most favorable soils. Science has done something to even up these defects, but spraying, fertilizing, draining, irrigation and protection against frost are expensive prices that we have to pay for sociological advantages.

"Truck growing is the poker game of Agriculture," in which transportation interests and fertilizer men are the "stake holders." There were and are some gifted and natural born truck growers. How otherwise can you explain the vagaries of grubbing up a grapefruit grove to clear the space for truck?

Most truck growers are individualists. They cannot act collectively; are easily intimidated by the interests or bought off by promise of immediate gain. They are improvident; they stake all on one year's crop. They are itinerant. I have met the same individual trucking in four different centers. Where they have acted collectively, they have had to be "bludgeoned" into line by sheer desperation. Even in the last decade and a half, the "strong arm" tactics have been more potent than an innate collectivism.

Frank Earle of Palmetto was a born horticulturist. Typhoid cut off his career as a Bermuda onion culturist on the Manatee. He belonged to a family of horticulturists (Parker Earle). He

was splendidly educated. Bold with caution. He was from Illinois, the region where a "community of interests" dominated in agriculture. I expected a large extension of this crop with Earle as the motivating figure. Fate decreed otherwise.

Howard, Kennedy and Lyle rescued Terra Ceia from trucking oblivion. Their cry, "Rescue us, we are sinking," had gone up to the Experiment Station. Director Clute responded. Lyle was so despondent that he offered to sell out his whole interests, lands, tomatoes, eggplants palmetto shacks were the only warehouses and dwellings), for the price of a ticket back to Mississippi, his home. Later that year he had paid off all his debts and had money in the bank. Made it on tomatoes and eggplants. How after Bordeaux mixture had lifted the tomato growers onto Easy Street, it was used on eggplant aphids with discouraging results. Another cry for help; kerosene emulsion did the trick. Later Lyle disgraced (?) truck growing by becoming a banker.

Such are the patches Fate used to design her horticultural "crazy quilt," truck growing. Yet with it all truck crops have aided immensely in the upbuilding and prosperity of the state. Some well directed and well organized truck enterprises occur. These have been due to the efforts of outstanding and exceptional individuals.

STRAWBERRIES

Up to the late '80's strawberries had been planted in a garden way in nearly all parts of Florida, mostly without success. Stephen Powers, editor of the "Florida Farmer and Fruit Grower," took up the work seriously at Lawtey. Through his instrumentality, the plantings were extended and shipping methods perfected. Lawtey and strawberry growing became synonymous. Powers moved to Jacksonville, Lawtey lost her supremacy. She still grows and ships berries, but other cities in the vicinity surpass her. The great strawberry center at present is in the Plant City region.

Powers was Secretary of the Horticultural Society at the time of his death. He was genial and obliging, but almost painfully reticent.

DECIDUOUS FRUITS

PEACHES. In the late '90's, peaches and pears vied with the orange for popularity. Delicious peaches have been produced from as far west as Escambia County to as far south as the Everglade country. Last year I ate fine peaches grown by Mr. Alfred Dickinson, at Bonita Springs. F. D. Waite grew fine honey peaches at Palmetto. Kissimmee shipped delicious Peen-toos in the nineties. Orange, Lake and Volusia Counties have produced peaches on a commercial scale. The nurseries of northern and western Florida grew peach nursery stock by the hundreds of thousands. Taber and Godby originated varieties that had special merit. If we had the data, it would probably be found that the total number of peach trees sold in Florida would exceed that of citrus. During the '90's peach nurseries were the more extensive.

The big peach growing region was centered around DeFuniak. The West Florida Horticultural Society did valiant work to stimulate peach growing. Large shipments of Elbertas and Sneeds went forward. C. K. McQuarrie, George Mellish, Plank, and Stubbs took leading parts.

Through propaganda by the railway companies, people planted extensively. When production increased to a stage where the early peaches were no longer sold as a novelty, the cost of transportation and sales commissions exceeded selling prices. In other words, those agencies between them smothered a promising industry.

Peach growing for the early and fancy markets throughout Florida and as far south as the Everglades, merits investigation. The varieties and stock have not been standardized. The varieties must be chosen so as to ripen ahead of the more northern crop.

PEARS. The pear growers were widely scattered from West Florida, centering at DeFuniak Springs, to Central Florida. Archer was one of the largest shipping points. The orchards were rarely more than ten acres in extent. Remnants of orchards planted over forty years ago testify to the hardihood of the Le Conte. Some fruit was produced on the Manatee. Lake County made some shipments. Pear orchards of small size were planted in nearly every community from Central Florida, northward.

As a commercial proposition pear growing found itself between the upper millstone, transportation, and the nether millstone, the pear buyer. Transportation had to be prepaid, so the buyers bought for a price that assured a profit to themselves. No wonder a substantial income to Florida disappeared.

KAKI, JAPANESE PERSIMMONS. This delicious fruit has never attained the popularity it deserved. At the time of its ripening, the northern markets are glutted with home grown fruit. A small quantity can be marketed there, at remunerative prices, to the fancy trade. Its high nutritive value is appreciated by but few. At one time it was recommended that the Lake County crop be used for fattening hogs. The Kaki, which is to me one of the most delicious fruits, is rarely available on the market, even in Gainesville.

A NEW PICTURE. The introduction of trucks and automobiles has profoundly modified the picture. Today Florida alone would absorb all the deciduous fruits she produced in her palmiest days. The trucks effect the distribution that was lacking in the '90's. The fruits ripen when there is a dearth of homegrown fruits. Georgia peaches find a lucrative market in Florida.

The production of deciduous fruits in Florida could be made to supply a large local demand. The fault is ours, not that of the fruit, nor the soil, nor the climate.

SIX MORTALS AND IMMORTALS

GODBY, T. K. Originator, propagator and distributor of Godby and Waldo peaches.

Our earlier Proceedings occasionally refer to his work. In later years he devoted himself especially to ornamentals. He has an extensive fund of practical knowledge of deciduous fruit growing in Florida. Reticent, almost a recluse.

HEALY, G. P. The Bald Eagle from Volusia. Noted for his want of hirsute adornment. His sudden attacks, sarcasm, wit and oratory carried us over scientific doldrums. He started in as a citrus grower; then went into peach growing; a good man gone wrong, he finally went into politics. He was one of the last of the commercial peach growers.

HENDERSON, F. P. A Florida Cracker with a Yankee temperament. Dabbling into all sorts of

horticultural projects. His distributions of *Sphaerosilbe coccophila* by mail had attained to large proportions and was growing. Hundreds of acres of peach orchards in Texas were treated successfully with it. He was the only active merchant in that field for red-headed fungus of the San José scale. He was disturbed because the peach growers were reaping so large a profit and he was getting so small a price for the fungus. The "testimonials" from customers would have filled the heart of an insecticide manufacturer with envy. It is the cheapest and most effective San José scale remedy that we have. In fact, it is naturally so efficient that the name of the scale has nearly disappeared from our vocabulary.

The great obstacle for its more general use lies in the fact that it has few friends among the entomologists, no friends among the large interests of insecticide manufacturers and the spray machinery manufacturers. Some of the "higher-ups" in Entomology feel that the less said about the "fungus enemies of scale insects, the better." Their principal interests lie in the direction of propagating parasitic insects—a most laudable field.

The weak point in applying nature's remedy is that the horticulturist depends on the state and Federal agencies for propaganda. And, believe me, it is exhausting and time consuming. Propaganda often accounts for more than 50% of the price of some insecticides and spraying machinery. If a scientist were to expend that much of his time for propaganda—well, you know what would happen to him.

On account of the possibility of distributing diseases and pests the distribution of natural material is not permitted.

McQUARRIE, C. K. Secretary of the West Florida Society at the time of our Pensacola meeting. A farmer and fruit grower from DeFuniak Springs. The West Florida man on whom we could always depend for help in the Farmers' Institutes. Later he became county agent for Escambia County. From that he was promoted to State Agent. In this latter capacity he did his really great work. His intimate acquaintance with North Florida agriculture, horticulture and county commission culture. His Scotch geniality; his

rugged honesty; his directness of purpose, brought many a county into alignment. You, my friends, have profited from him more than you realize. He brought to you many an educated man as county agent, who knew or would soon learn to know, local conditions. In place of concentrating agricultural knowledge at the Agricultural College, it was diffused to every county co-operating. His acquaintance with thousands enabled him to mould the sentiments of legislators and county commissioners.

Through the farm and home demonstration work, agricultural education was carried to the point where it was most needed, the country home and homestead. McQuarrie was a staunch believer in collectivism. He had seen the West Florida peach industry fade out because it was "everyone for himself and * * *." From his dour experience in West Florida, he perceived that our weakest point was the lack of agricultural information by the rank and file of the rural people. But for the good work done in the counties, the canker fight would have been lost. The Medfly would still be with us. And what would have happened two years ago to the Experiment Stations and to the Extension work, without a united front?

"There is a divinity that shapes our ends,
Rough hew them how we will."

My dear old C. K.!!! You have journeyed to that distant land from which no visitor returns. How I miss you!!

MELLISH, GEO. He was one of the most active peach growers in DeFuniak Springs, but had to surrender because the transportation charges were greater than "the traffic could bear." He headed our operations for the extermination of the San José scale. In his company, we checked over every peach, plum and apple tree in Walton County and the presence or absence of San José scale was noted. Later he headed the Experiment Station field operations of spraying.

One of the amusing incidents that happened was when we visited the spiritualist to get permission to inspect his orchard. He assented readily enough, after lecturing us on the influence of mind over matter. We had expected to be re-

fused permission. We had left him until the last. He told us that, of course, we would find the scale insects present because that was in our minds. When we revisited him to report that nearly every one of the trees was infested, he said he knew beforehand that we had our minds made up on finding it and of course we saw what was in our minds. He admonished us to go home and forget that we had seen the San José scale in his orchard. That as soon as we had forgotten about his orchard, the malignant spell would disappear. Sure enough, when I revisited it about a year and a half later, I could find no scale. Nor were there any fruit. He regarded the use of fertilizer as another hallucination of the community—he used none and marketed no peaches.

TABER, GEORGE L. A "down Easterner." Brought with him all the amiable and rugged qualities portrayed by novelists. Has written himself indelibly into Florida Horticulture through his nursery catalogs, in the Proceedings of the Horticultural Society and in articles to the horticultural press.

His leaders were peaches and kaki (persimmons); of both much was expected. I met him first in 1892; reticent but genial. He "inspired" Hume to write "Citrus Fruits and Their Culture." "Nuf said."

PECANS

The pecan is unique in Florida Horticulture. It has never had a boom and so never had to be deflated. Like the rest of us, the pecan grower has had his years of exhilaration and years of depression, but the tree keeps on serving its owner. The old time propagandist advertised it as an absolute resistant to any insect pest or disease. The pecan has fallen from grace. It has attracted some insect pests and acquired some diseases. It can now be catalogued as a domesticated species.

BROWN, ARTHUR, Bagdad, Florida, was a voluminous writer on the taproot hypothesis of fruitfulness. He had a score or more bearing seedlings producing excellent nuts of large size. It was the beginning of the pecan era—late '80's and early '90's. Brown by vigorous publicity had worked up a good trade for seed from named trees, one he called Helen Harcourt. Our friend Taber and other nurserymen were beginning to

put grafted nursery trees on the market. Arthur Brown set up the theory that no pecan tree with a damaged or defective taproot would produce a crop of nuts—hence, as a corollary, no nursery pecan could possibly be remunerative. After the hurricane of 1893 or 1894, I visited my friend Arthur and he very reluctantly permitted me to make photographic exposures of some of the overturned pecan trees. Some of them had no taproot whatsoever. We compromised. He promised to forget about taproots and I promised not to publish the photograph. It was a lucky break for me, as the plates had been over-exposed and were quite useless. The nurserymen never knew why Brown said nothing more about taproots.

Dr. J. B. CURTIS, Orange Heights, originated and propagated some excellent varieties of pecans. Among them the Curtis and Hume (Curtis No. 5; see "The Pecan and Its Culture"). He has some seedlings from the Brown trees.

TABLE GRAPES

The growing of table grapes in Florida has had two major periods. The first opened with the experience of Baron von Leuteschau at Earleton, south of Waldo, in the late '80's. He carried on his experiments with the greenhouse types, growing them out of doors. The Baron, not needing the money, ducked out before the decline in the mid-nineties. In the early nineties extensive plantings were made in Lake and Orange Counties. My first basketful of table grapes, Concords, was purchased at Grand Island in 1893, I think it was. They came from a vineyard said to be forty acres in extent. West Florida also took a hand in the grape game. Then there was a "diminuendo."

The second period was ushered in with the second decade of the present century. The principal propagandists were in the Tampa environs. One finds vineyards located well to the northern part of the state.

The Florida Key grape merits mention. Prof. George Husmann made a trip to Key West about 1904 especially to see a notable vine there. The history of this vine dated back to about a half century, making it easily the oldest table grape vine in the state. It had a numerous progeny planted on the Florida Keys and fruiting as far

north as Miami. Under favorable weather conditions these vines ripened three and even four crops in a year. Prof. Husmann identified this Key grape as belonging to the Black Hamburg variety.

At the Subtropical Laboratory, under Prof. Husmann's direction, we planted some hundred or two hundred varieties of European and American varieties. We got some good grapes, but the cost of bagging and spraying made the project commercially unattractive. Nevertheless, two different vineyards of five or more acres were planted out. They succeeded, but other commercial ventures were so much more lucrative that grape growing was given up.

Table grapes have been marketed from Miami to Pensacola, but the vines and grapes have need of so much coddling that other lines of endeavor have been more attractive.

PINEAPPLES

It appears that the first pineapples were fruited at St. Augustine long before they were thought of as a commercial crop. After transportation facilities arrived, the industry spread down the East Coast, utilizing at first only the hammock lands on the islands east of the Indian River. A Mr. Ingram and John B. Beach had an "extensive" planting of two or three acres, northeast of Melbourne, across the Indian River. That was in the early '90's. Pineapple production spread southward like a conflagration. By 1905 it had reached Elliott's Key and Key Largo. The "Conks," long before, had planted some near their habitations. Perrine (See "Nine Leaders in General") appears to have imported some. Palm Beach boasted of having "the largest pineapple field in the world," two hundred sixty acres, in one unbroken tract. Mr. Mathis controlled the largest portion of it. They called him "the most extensive pineapple grower in the world." The shipments from the East Coast figured in the hundreds of thousands of crates.

Slips and suckers had been brought in by sailboat loads. Abandoned and useless fields on the West Indian Islands and even the coast of Mexico were ransacked for plants. Rickards of Boca Raton got a carload from the Hawaiian Islands.

Spruce pine lands rocketed up in price; some

choice tracts went up to the fantastic price of "\$100.00 an acre." Shredded pines brought fancy prices produced heavy crops and lucrative returns. The East Coast pines came onto the market after the citrus crop and before the ripening of northern deciduous fruits. Propaganda exploited the region as the horticultural El Dorado. Even bankers "lost their heads" and invested in "choice lots" that existed only on the charts of the skilled propagandists.

The discovery that spruce pine land was a suitable habitat for pineapples was more by accident than by intent, as told me in the early '90's, by a Capt. Hardy, I believe was his name. It seems that he was in New York with a return ticket to Jacksonville and only \$10.00 in addition. A schooner came in with some tropical fruits. He bargained for all of the pineapples his money would buy, twisted out the crowns and carried them back with him to the "Indian River country." There he heeled them in near his shack, which in the homestead days everyone built in the spruce pine lands.

Before he could plant them out on the hammock land east of the river he was taken sick and remained in bed for weeks. When he had recuperated he found that the pineapple plants were growing lustily, and feared that a removal to the river hammock land would prove disastrous. They did so well that all his slips and suckers were planted on spruce pine land.

My hat is off to the pioneer; he faced privations with a smile; hardships with ridicule; and isolation was his diversion.

FATE reaches for a card; it has "Cuba" written on it; she hesitates, but decided to place it in the catalog of nations.

Pineapples from nearly all of the West Indies and even Mexico poured into the market created for the Florida crop. The Florida growers struggled on. Then came the knock-out blow. Pineapples were being shipped from Havana, through Miami to Cincinnati for a little more than one-half the price charged by the Dade County growers when delivered at Miami. The steamships sailing out of Havana wanted freight, so put on an all-water rate to Cincinnati. The Republican Congress treated Democratic Florida to a dose of

free trade. This prevented any new capital from flowing into the industry. The more progressive growers put their money into some other enterprise. To account for the decline, the former propagandists hollered "freezes" for an alibi. The once prosperous pineapple industry went into a "diminuendo."

T. V. MOORE (son of T. W. Moore, see Literature) was one of the most astute of the East Coast pineapple growers. In the late '90's he had an extensive plantation at Chetolah (just north of Jensen) and trucking fields east of the Indian River. He had an almost year-round income. His laborers were constantly employed. Between the pineapple crop and marketing of truck there was considerable income from marketing slips. Later he proved his ability further by becoming wealthy as a business man in Miami.

CAPT. JOHN SORRENSEN, Moore's father-in-law, stuck it out to his last in pineapple growing.

C. T. McCARTY, an extensive pineapple grower, past President of the Horticultural Society, switched over to citrus and went into law.

Orlando produced fine Smooth Cayenne, but commercial enterprises engulfed the fields and citrus culture was the magnet. Pineapple growing was an episode. Punta Gorda and Fort Myers shipped an appreciable crop. At the latter place, Washburn drained and ridged up flat woods to make a pineapple habitat. It failed.

DR. H. J. WEBBER and W. T. SWINGLE originated a large number of varieties by hand pollination. These were fruiting in the middle of our first decade. Some of them were of superior quality. At the time pineapple growers were "sick of their jobs." I doubt if one of these superior varieties remains.

MANGOES, AVOCADOS, CASHEW

The propagation of tropical fruits other than citrus and pineapples is of relatively recent origin. The principal propagators are alive and "live ones." They are living in the most delightful period of Florida horticulture. The airplane and the automobile are at their services. These marvelous highways are theirs free, for the using. Wonderful tropical gardens have sprung up, that forty years ago even the Gullivers among us dared not predict.

At the beginning of the present century, Geo. B. Cellon was just budding his first nursery of avocados and mangoes. John B. Beach, at Melbourne, in the early '90's, had a hundred per cent. success in budding mangoes. He moved to West Palm Beach and lost the art. He was the only man who made a commercial project of supplying "seed grafted" avocados. Later his commercial interests engaged his whole attention. Horticulture lost an able man.

P. J. WESTER was a day laborer at Palm Beach. His rise, self-education, and work in the Philippines are a monument to his ability. A Scandinavian, he ran true to form. He had fine ability to acquire horticultural information, but lacked in inclination and enthusiasm to disseminate either knowledge or plants. Some of his best "stunts" had to be rediscovered. The late EDWARD SIMMONDS, his successor, was an excellent plant man and a good mixer. Left a decided impression on local horticulture. Always had time to show me a species or a variety that was "appy" and sympathize with one that was not "appy."

PROF. GALE, at Mangonia (now engulfed by West Palm Beach), appears to have been the first to fruit the Mulgoba. The tree was received from the U. S. Department of Agriculture. He had planted his mangoes on spruce pine land. The natural dryness of the atmosphere had a notable influence on preventing bloom blight (*Colletotrichum*). Later, wind brakes, the growth of orchards and cover crops conserved the atmospheric humidity, bloom blight flourished; production diminished. GEO. B. CELLON bought hundreds of buds from this Mulgoba tree to top work bearing mango trees in the Dade County section.

REASONER, P. W. Pliny Reasoner, as he was affectionately called by almost every horticulturist, I met during my early days. Although a recent recruit, he had made an enviable record for himself. I never met him, but his spirit radiated through his many colleagues until I felt his personality. His untimely and lamentable death occurred before my advent to the state. As far back as 1889 he was quoted as an authority on foot-rot. (Vol. 2, pp. 32 and 34, Fla. Exp. Sta., 1888.)

REASONER, E. N. His influence on Florida Horticulture will be greatly underrated by the historian. The thousands of species and varieties

that have found a permanent abode in the state through his efforts will continue to be an ever increasing monument.

The catalog of the Royal Palm Nurseries has been a standard that many have tried to emulate and few have equalled. His papers published in our Proceedings remain as a permanent attestation of his ability.

I think it was near 1893 that I paid my first visit to his home. It seems to me that his soul expanded with the years. All of us older men who knew him as a nurseryman, as a horticulturist, as the head of a family, as a citizen of Manatee County, feel that we can live a better life for having known him.

The Reasoners are well authenticated in literature, but that gives us no idea of their pleasing and amiable personalities.

HADEN, CAPTAIN. Among the tropical fruit growers, he will be best remembered by the Haden mango, a seedling from the Mulgoba. This was the best one, from among a number that he grew to fruiting.

It seems to be quite forgotten that the Captain produced the finest lot of CASHEWS that have been ripened in the state. The fruit was luscious and delicious. George Oliver, the tropical plant propagator, while squatting under a tree, gourmandizing on the ripe cashews and fighting mosquitoes with both hands, remarked: "Rofls, this is the first time I have ever been in heaven and hell at the same time."

Mrs. Haden has told me that these eight cashew trees were from seed that arrived at the local postoffice, from Brasil. There was a note on the box, requesting the postmaster to hand the seeds to someone interested in horticulture, in case the addressee was not to be found. One of these trees is still alive, although nearly suffocated by native vegetation. This abused remnant, overgrown by oaks, is located beyond the east end of Hardee Avenue, about fifty feet from the old stone fence.

NEELD, BILLY. The caustic, vitriolic Billy. He said little and wrote less. But sometimes when he did, it seemed as if he dipped his pen into concentrated sulphuric acid. In his family life—he was a very meek and subdued husband. I enjoyed his irony and sarcasm. His wit in taking off some of our foibles was excruciating; though I never

Hollingsworth was thoroughly disgusted by being overwhelmed by the clipper men. He went home and published his own "proceedings."

Now comes the surprise. According to reading notices dated April, 1935, Prof. J. R. Winston, Horticulturist, U. S. Department of Agriculture, has discovered "Pulling grapefruit instead of clipping it gives less stem-end rot." (Agricultural News Service, Apr. 5, 1935.)

HUBBARD, HENRY G. A resident of Florida by force of physical circumstances. He had a very beautiful home place at Crescent City. A genial and cheerful companion. In 1885 his 227-page bulletin on "Insects Affecting the Orange" was published by the United States Department of Agriculture, from the Division of Entomology. That was in the good old days when the azure of Entomology was reached through describing new species. Prof. Hubbard's Elyssium lay in the field of the Coleoptera.

The "great" entomologist had ascended through that portal. Classifying and listing insects was the great scientific indoor sport. It brought salary and applause. When an insect had been classified and its life-history had been traced, the work was complete. The rest was up to the farmers. Occasionally an addenda might give vague instructions for treatment.

The passage of the Experiment Station Act, 1888, liberated a "flock" of youngsters who viewed Economic Entomology from the standpoint of the husbandman. Hubbard "fell from grace." He discovered how to mix kerosene and water by adding soap; kerosene emulsion. Bureaucracy prevailed; Hubbard returned to the fold. Morphology is an important aid to Economic Entomology, but is not synonymous with it.

ROSE, CAPTAIN, R. E. A most constructive piece of work which Captain Rose put over was the chemical standard for ripeness of citrus. It was he who placed the chessmen on the board, so that McRae, Commissioner of Agriculture, and W. C. Temple of the Citrus Exchange got together at the Gainesville meeting. The two luminaries had been at cross purposes and only a master mind could appreciate the opportunity and see how to move the pieces on the board, to win the game. McRae was made Chairman, which kept him off the floor and very busy keeping order. Temple, a

past master at handling such a situation, had the State Chemist and the Experiment Station to aid and abet him. Both of these had shown that the sugar-acid ratio in the juice of citrus fruits was a more reliable test for ripeness than any other. But nobody did anything about it. Temple had provided the salary for a Chemist; The Experiment Station the laboratory to make a long series of sugar and acid determinations. This had convinced him completely. But still there was hesitation. A public meeting was necessary. A. M. Henry, Assistant State Chemist, made public determination of any orange handed him and this proved to be the final clincher.

Florida was the first state to adopt a rational standard for citrus maturity.

We could always count on the Captain for help in the Farmers' Institutes. His papers before our Society were timely and worth-the-while.

SAMPSON, F. G. A strong individualist; that was why he could go into the wilds twenty miles from railroad, before there was a citrus industry, 1874; convert wild trees half a century old into a prolific orange grove. His grove at Boardman remained remunerative to the end of his days. Through all the changing vicissitudes, Sampson was always ahead in the game. He was the one citrus grower who could not be bluffed, brow-beaten, domineered over or bribed. When the transportation company abused his fruit in transit or delayed it in delivery, they had to pay the damage, full damages or no settlement. The same with the buyers of his fruit. He demanded only what was just and accepted nothing less. He told the railway attorneys they might as well pay up at once because he would keep after them until it was finally settled and they learned that he was not bluffing. When the railroad proposed to abandon the station at Boardman, he informed them he would charge rent for the right of way, which was given in consideration of a depot at Boardman. He had been astute enough to have the letters recorded in the Marion County court house. The railway station continues to function. He adhered to the good old Quaker adage, "If thou cheatest me once, that is thy fault; if thou cheatest me twice, that is my fault."

Personally most affable and genial. A constant attendant on the Horticultural Society and Citrus

Seminars. An annual and most welcome visitor to the laboratories of the Experiment Station. Sometimes it took a day, sometimes two days, to dig up the information that he needed.

He was most generous in giving out information that had cost him dearly, but so diffident that he could not bring himself to speak before an audience. He wrote very infrequently. He even threatened to remain away from our annual meetings if we persisted in calling upon him to speak.

In addition to his orange grove, he had a remunerative lemon grove at Safety Harbor in Pinellas County. He told me that either one would give him a greater income than he needed. The lemon grove gave better returns and was more attractive, so he sold that. It has been worked over to grapefruit, I believe. He considered a lemon grove the best citrus proposition in Florida, but, as he put it, he would want all his time free to grow lemons.

He was a strong individualist; not a provincialist.

STEVENS, H. B. He was brought to Florida on a stretcher. In the darkest days of our citrus industry (1895), in an informal group between sessions, all that said anything were planning to leave the state. Stevens, robust, genial fellow, spoke up and said that he came to Florida to die and was of the same mind still.

Always companionable and always doing something worth while. He has completed for us four outstanding projects:

1. Dredging muck from Orange Lake to fertilize an extensive grove. Result, the adage, "Hauling muck is a harmless amusement."

2. Exterminating the whitefly after defoliation by cold with DeLand as a unit. Citrus and all other evergreens which might harbor the pest were completely defoliated. Results, negative. Dr. Berger discovered later that the pupal stage of the whitefly can live on dried leaves until new growth of citrus appears.

3. Protecting citrus with half shade, sheds; can be done, but was not profitable in ordinary years.

4. Producing a citrus grove in a piney woods. Last year I saw his sixty-acre grove ranging in age from trees recently set out to twelve years old. All in splendid condition and as remunerative

as groves under ordinary conditions. I would not have believed it without seeing it.

STEVEN, J. A., Son of H. B. Stevens. To him belongs the credit for initiating the Citrus Seminar, in 1910 or 1911, in the old dormitory, Thomas Hall. There were no set lectures, simply laboratory demonstrations and explanations. The first call was for 15, our seating capacity; 29 enrolled with an average attendance of twenty-three per session.

The next year we had moved into the new Experiment Station building. The attendance was more than doubled. The good reciprocal effect of these laboratory exercises cannot easily be overestimated. They brought out many of the citrus growers who rarely attended the Horticultural Society meetings. The Experiment Station staff was put on its mettle to provide instruction that would fit in with the knowledge of the citrus growers. Really a one-week laboratory course.

Classes were held from eight in the morning to five in the afternoon with two hours for lunch. In five years the attendance had so increased that even the commodious laboratories of the Experiment Station Building were inadequate. Formal lecturing had to be resorted to. Splendid help came to us from Tallahassee and from Washington.

By 1920 the attendance reached some 250, rivaling the Horticultural Society. It more than justified J. A. Stevens' concept; but had lost its original basis—a meeting of a small group of citricultural scientists. The Seminar ideal.

About 1915, the leaders in the Horticultural Society were fearful that the growth and popularity of the Seminar would cripple the Society. The two programs, however, were mutually complementary. The Seminar took up all sorts of problems and fact supported theories that might or might not stand when the grove man brought in his criticisms.

The Seminar is one more of the has-beens; the Florida Horticultural Society keeps on functioning. The practical citrus grower seems to have developed faster than the scientist.

SWINGLE, WALTER TECUMSETH. I first met Swingle returning from the 1892 Horticultural Society at Ormond. He invited me to call at his headquarters at the Magnolia Hotel in Leesburg.

which I did sometime about June or July. He had preceded me to Florida about six months, so naturally I looked up to him as an old-timer. I asked him what in his opinion was the worst disease of oranges in the state. Instantly he replied, "Non-residence!!"

He was a most delightfully witty companion; very generous in what he did for others. Rules and regulations irked him; he enjoyed circumventing them. He said that his greatest irritation in Germany was the omnipresent "Verbotem."

His encounter with Bean of the Eureka insecticide was so masterly that no one else had the temerity to attack him. He saw more clearly the real interrelations of science and horticulture than anyone I ever talked to. He showed me clearly that our set-up was basically wrong. Instead of studying the orange as a crop, we were giving all our thoughts to the diseases or insects. That we were recommending all sorts of nostrums for insects and diseases without knowing anything about the reaction of the tree. Thrip juice (arsenic of potassium) he considered a rank poison to the tree because of its effect on the citric acid of the fruit.

Fate drew out a card; it was marked "Chills"; she filed it under Florida. Swingle and Webber moved out of the state.

WAITE, F. D. Genial, companionable and generous. His principal, a Rhode Islander, I believe, frowned on giving out information. Waite made the grove great, but himself unappreciated. Many of his best horticultural practises remain a closed book. He handled the ordinary diseases as if by magic. Blight was the one thing that was too much for him. He could spot a new case sooner than anyone else that I have worked with. At one time he had a grove of forty-two transplanted blight affected trees.

He amazed me most by rejuvenating old, decrepid and debilitated groves, converting them into remunerative properties. His honey peaches were a gastronomic treat and a delight to the eye.

His packing house, although recessive in some respects, sent out fruit that topped the market. Always working under pressure. Always ready for emergencies that arose or that might arise.

WARTMAN, E. L. Probably best known through

marketing the finest pineapple oranges produced in the state. I have not seen their equal. He attributed this to the benign climate and unequalled soil; maybe so. Who can disprove it? He knew Marion County was the best county and didn't hide this knowledge from anybody. He was just as provincial about the Woman's College and the University.

The greatest work he did for Florida Horticulture was when as a legislator he threw himself whole-heartedly into the passage of the Buckman Bill. He served for repeated quadrenniums on the Board of Control and on the Plant Board. Being a grower and shipper of citrus fruit, his judgment determined the actions of these Boards. (See also: Milt Bryan, under Nine Leaders in General.)

CONCLUSIONS

1. I have endeavored to give you a close-up of Horticulture forty years ago. You know what it is today. Marvelous progress! I record some names and movements that are all but forgotten. Some of them would otherwise be lost. No attempt has been made to cull literature; that may safely be left to an historian. The address is replete in reminiscences, anecdotes and, I hope, data. It should inspire greater courage and greater fortitude.

2. Movements, leading to great good or to great evil, have their origins in trivial incidents, perceived by commonplace men. Great men comprehend and co-ordinate them for private gain and public weal; selfish men for private gain.

3. Florida is a great state. She might easily have been greater. Her beneficent climate; the productive soil; the nearness to the centers of consumption; all favorable. Too frequently, either for private gain or because of lack of perception, we have followed the wrong trend. For the present, our major project is to adapt ourselves to the gasoline age and the new sociological trend.

APPENDIX LITERATURE

I. EARLY BOOKS.

1. Treatise and Hand-book of Orange Culture, Moore, Rev. T. W., D.D. Ran through four editions, from 1877 to 1881. There appear to have been revisions of the fourth edition, one bearing

the date of 1892 on the title page. There was probably one later printing since the Doctor told me that he had just completed material for the printer.

In the preface to the first edition, the author says naively: "This book is intended as a manual for all who wish to best succeed with the least expense in the growing of the orange." (P. ix, fourth ed.)

In his conclusions to the fourth edition, he closes by saying: "Finally, to be successful, the fruit grower must watch and work; but not always, for soon the golden harvest may be had for the gathering." (P. 152, 5th ed.)

2. MANVILLE, A. H. *Practical Orange Culture Including the Culture of the Orange, Lemon, Lime and other Citrus Fruits as Grown in Florida.* Ashmead Bros., Jacksonville, Fla., 1888.

In the preface to his modest 122 page book, we find a statement that should be of great comfort to the Florida Horticultural Society. "Orange culture, like everything else in our busy world, is progressive. What a few years since was a chaos of conflicting opinions and practices has been reduced to something like system." (Pg. 5.) "In dealing with this pest (scale insect), it may be laid down as a rule that healthy vigorous trees are seldom or never seriously attacked." This reminds me of the observation of my first family physician: "A perfectly healthy man never has malaria."

The author then devotes some pages (87-90) to the emulsifying of kerosene with milk.

3. WHITNER, COL. J. N. *Gardening in Florida, a Treatise on the Vegetables and Tropical Products of Florida.* Professor of Theoretical and Practical Agriculture in the Florida Agricultural College, Lake City. C. W. Da Costa, Jacksonville, Fla., 1885, second edition and apparently the last. He devotes five pages to the orange, discussing Varieties, Fertilizers and Culture.

4. HARCOURT, HELEN. *Culture of Citrus Fruits in Florida and How to Raise Them.* 1886; 125 pps. Also author of several novels.

5. HART, E. H. *Federal Point.* In the last edition of "American Fruit Culturist," by John

H. Thomas, 1885, with 593 pages, only three are devoted to orange culture. These are by E. H. Hart. This gives us some idea of how North American Horticultural literature regarded orange culture.

6. DOWNING, A. J., in his "Fruit and Fruit Trees of America," 2nd edition, published in 1885, dismissed citrus with three pages.

II. BOOKS WITH BIBLIOGRAPHIC REFERENCE LISTS.

HUME, H. HAROLD, "The Pecan and Its Culture." *The American Nut Culture Journal*, 1906. 159 pages, 38 illus. Bibliography on pps. 153-155.

HUME, H. HAROLD, "Citrus Fruits and Their Culture." Orange Judd Co., 1915, 3rd ed., 587 pgs., 124 illus. Bibliography on pps. 555-560.

III. CURRENT LITERATURE.

1. *Experiment Station Bulletins and Annual Reports*, Gainesville.

2. *Extension Bulletins*, Gainesville.

3. *Publications by the State Plant Board*, Gainesville.

4. *Publications of the State Department of Agriculture*, Tallahassee. State publications are free to all citizens of the State of Florida.

5. *United States Department of Agriculture*, Washington, D. C.

(a). *Bulletins from Bureau of Plant Industry.*

(b). *Bulletins from Bureau of Entomology.*

(c). *Bulletins from Bureau of Chemistry.*

(d). *Bulletins from other Bureaus.*

Federal publications may be purchased for the cost of printing.

6. *Nursery catalogs.* A complete file of these would present a vivid picture of facts and fancies. Also the evolution of this potent branch of our horticulture. A complete file is probably non-existent.

7. *State Horticultural and Agricultural Periodicals.*

Weeklies, monthlies and quarterlies have been established, flourished and faded. Often they were determining factors yet one looks in vain for a complete file. This is the fault of the older generation.

The Librarian of the Experiment Station, Gainesville, will thankfully receive any copies or files over twenty years old, for archiving in their fire proof building.

8. Proceedings of the Florida State Horticultural Society.

Published by the Society, \$2.00 per current copy. Complete sets rare. Bayard F. Floyd, Secretary, Davenport, Florida. The most complete record of horticultural progress in Florida.