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DR. HENRY PERRINE, TROPICAL PLANT  
ENTHUSIAST

by NELSON KLOSE

After much research on the subject, this writer believes that no person worked with more devotion and energy for the introduction of tropical agricultural plants into the United States in the second quarter of the nineteenth century than did Dr. Henry Perrine.<sup>1</sup> His was the foremost pioneering in agriculture for the development of the newly-acquired Territory of Florida. Perrine's work came when a need was felt for new crops to diversify and bolster the agriculture of the South before effective assistance was given the states and before the Federal Congress had bureaucratized this work in 1839 with its first appropriation of \$1000 for agricultural purposes. Before 1839 the valuable work of finding and adapting foreign agricultural plants to the multitude of new opportunities and requirements in America depended upon the zeal of private individuals, including several of the nation's fathers, and upon horticultural societies. Perrine ranks prominently among his predecessors in this work. His contribution was to stimulate considerable interest in the possibilities of tropical agriculture in Florida and in the southern United States by his introductions of Mexican plants during his residence in Mexico as consul at Campeche. This work led to his death at the hands of the Florida Indians in

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1. The author's interest in Perrine began with a study of the assistance given him by the United States Congress in 1838 in the form of a land grant on Biscayne bay. This paper is based on the treatment of Perrine's work in the author's unpublished doctoral dissertation: *Foreign Plant Introduction by the Federal Government: A Study in American Agricultural History*, (The University of Texas, 1947).

1840 after two years work with his plants on the land granted him by Congress in 1838.<sup>2</sup>

Henry Perrine was a descendant of Daniel Perrin, Huguenot refugee, who arrived in New Jersey in 1665.<sup>3</sup> Born April 5, 1797 at Cranbury, New Jersey, young Henry became a school teacher while still in his teens. After completing his professional education, in New York it is believed, Perrine began his medical career in Indiana. Two years later he moved to Natchez, Mississippi, seeking a warmer climate. Here he learned to treat yellow fever and published several articles on the subject in the *Philadelphia Medical Journal* and in other medical journals of the day.<sup>4</sup> Still seeking a warmer climate for his health, Perrine in 1826 went to Cuba, and his interest in tropical agriculture dates from this time. Here he observed agricultural practices, compiled statistics, compared agriculture in Cuba and in the United States, and drew certain favorable conclusions regarding the prospects of tropical agriculture in Florida.<sup>5</sup> The lack of efficiency of labor and management on Cuban plantations in the production of sugar and other tropical crops appeared as a breach in the armor of a rival which should be turned to our advantage by the "introduction of tropical plants to the the industry of our free in-

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2. This was the third and last act of Congress to subsidize new crop industries and assist the acclimatization of foreign plants in the United States by granting to promoters favorable terms for the procurement of land. The first officially authorized assistance of the Federal Government to the work of plant introduction was a minor act in 1802 giving favorable terms to John J. Dufour and his associates for the culture of the vine. The second gesture was the Act of Congress, March 3, 1817, for the encouragement of the cultivation of the vine and the olive by the Tombigbee Association in Alabama. None of these grants succeeded in their purposes.
  3. Perrine, Howland Delano, *Daniel Perrin "The Huguenot" and His Descendents in America, of the Surnames Perrine, Perine, and Prine, 1665-1910*, p. 23.
  4. Reese, Joe Hugh, "Florida's Priority in Plant Introduction," in *Hollywood Magazine*, March, 1925, p. 30.
  5. 25th Congress, 2nd Session, *House Report 564*, p. 17.

stitutions. "The proximity of Cuba to Florida suggested ease in accomplishing this objective.<sup>6</sup>

Perrine's experiences in Cuba undoubtedly led to his appointment as United States consul at Campeche, Yucatan, Mexico, in 1827. On September 6 of that year the Treasury Department issued its second circular,<sup>7</sup> largely the work of John Quincy Adams, calling on port collectors and officers of naval and merchant vessels to lend their assistance in the collection and transportation of valuable agricultural seeds and plants to the United States. Undoubtedly this was a welcome cue to Perrine in Yucatan. He worked and sacrificed his financial interests during nearly nine years of residence in Mexico to further the aims of the Treasury Circular of 1827.

While in Campeche Perrine worked to procure and export Mexican plants, especially the fiber-producing agaves. His medical skill he used to promote his main objective by administering to the native Mexicans of both humble and influential station. Undoubtedly he sacrificed many fees he might have collected had he not given his services hoping to procure jealously guarded seeds and plants. Other Americans in similar consular positions did make fortunes through the advantages of their office. There is ample testimony to the valuable medical services which Perrine gave Mexicans during epidemics of both yellow fever and cholera.<sup>8</sup> He himself suffered from attacks of cholera and yellow fever and survived by the use of his own remedies. In spite of his great services the Mexicans time after time defeated Perrine's attempts to ship live plants or seeds out of Mexico, though they could not openly refuse him. No farmers at any time have cared to risk losing a valuable market for their crops by assisting in the development of a rival crop industry abroad. The Mexicans were no exception and gave Perrine much reason for

6. 22nd Cong., 1st. *H. Report 454*, p. 15.

7. The first was circulated in 1819 by Secretary William H. Crawford.

8. 25th Cong., 2nd. *H. Report 564*, p. 10.

discouragement by their cunning destruction of the viability of seeds and plants. Often they reported that seeds either were not ready to gather or had already been lost, or they delayed transportation of plants so that they died on the way out of Tabasco or Yucatan.<sup>9</sup>

Plants which he shipped out on Mexican and Spanish owned and manned ships did not fare well. When plants did reach the United States there were no facilities for their care and frequently no interested persons at the ports to nurse them. However, he did send many of his plants to friends. Charles Howe, postmaster and inspector of customs at Indian Key, Florida, received and cared for plants on that island, and John Dubose, one-time inspector and lighthouse keeper at Cape Florida, cared for other plants at Key West. Other friends did likewise while Perrine remained in Mexico.<sup>10</sup>

Perrine's first attempt to secure a grant of land from the Federal Government was in 1832. On February 9, 1832 the Lyceum of Natural History of New York adopted a resolution favoring Congressional aid to Perrine's plan for the cultivation of sisal hemp. He wrote in 1830 that he had

. . . secured the assistance of Professor Torrey, of the Medical College, Mr. Peale of [the] Museum, and the Messrs. Princes, of the garden at Flushing, Long Island, for receiving and preserving, subject to the orders of Government, everything that remains, of what he has already sent on, and all that he may hereafter transmit.<sup>11</sup>

The Legislative Council of Florida cooperated in 1832 by incorporating the Tropical Plant Company of Florida and by directing the delegate in Congress to work for a land grant for the company.<sup>12</sup> The governor and the Legislative Council of Florida were both interested in Per-

9. 22nd Cong., 1st, *H. Doc. 198*, p. 7.

10. 25th Cong., 2nd, *H. Report 564*, p. 59.

11. Perrine to the Secretary of State, January 1, 1830, in 22nd Cong., 1st, *H. Doc. 198*, p. 10.

12. 25th Cong., 2nd, *H. Report 564*, pp. 11-12.

rine's work, because it might assist the development of their state. The governor recommended the granting of a charter to Perrine and to such a company as he would form for the introduction of tropical plants and hoped that the National Congress would grant aid to Perrine and the enterprise. The governor was seeking a counter-attraction to the large homestead land grants drawing settlers to Texas at this time.<sup>13</sup>

Perrine solicited the attention of the public by writing letters to newspapers regarding the opportunities in the cultivation of tropical plants.<sup>14</sup> He made experimental shipments of the century plant (*Agave americana*) to Dr. Samuel L. Mitchell of New York and Domingo Fleitus of New Orleans.<sup>15</sup> In 1834 the Secretary of the Navy, Levi Woodbury, wrote him, "I have the honor to inform you, that this Department, will be happy to give any aid in relation to the subjects named, which the existing laws may authorize."<sup>16</sup> Professor Don Ramon de la Sagra of the Royal Botanical Gardens of Havana promised to give aid to Perrine in his work in south Florida in return for plants from Yucatan.<sup>17</sup>

The large extent of newly-acquired Florida would lie useless unless experiments were made to find profitable agricultural productions to attract a population. Perrine favored small landholders who would defend the vulnerable peninsula if need be. He wrote on this theme as follows :

If the suggestions of the memorialist, and if his experiments should be successful, the arid sands and arid rooks, and mangrove thickets of the coast, the miry marshes, pestilential swamps, and impene-

13. Perrine to the Secretary of State, January 1, 1830, in 22nd Cong., 1st, *H. Doc. 198*, pp. 17-18; 29th Cong., 1st, *Sen. Report 94*, pp. 5-6.

14. 22nd Cong., 1st, *H. Doc. 198*, p. 10.

15. *Ibid.*, p. 7.

16. 25th Cong., 2nd, *Sen. Doc. 300*, p. 139.

17. Woodburg to McLane, February 15, 1834, in State Department Archives, Dispatches Received, Campeche, January 25, 1820-June 21, 1834, Vol. I.

trable morasses of the interior, may all, ultimately be covered by a dense population of small cultivators and of family manufacturers ; and tropical Florida will thus form a well garisoned bulwark against invasion in every shape and shade . . . . Emigration from the south will be prevented, and even its ruined fields and barren wastes will become covered with a dense population of small cultivators. . . .<sup>18</sup>

The cultivation of tropical plants, he thought, could be extended northwards from Florida into the other southern states. When these should share the benefits of the new industries they would cease to calculate the value of the union. This hope was based on the false idea held by many at that time that tropical plants could be gradually acclimated to the colder temperatures of the North. Having in mind rice, tobacco, cotton, and sugar, he pointed to the “. . . history of all tropical plants whose cultivation has been gradually extended towards the poles.”<sup>19</sup> Tropical plants would be suited to the exploitation of sterile, swampy, pestilential lands. What the soil of Florida lacked, the air and moisture, he explained, would supply to the plants which he sought to cultivate, Also,

The possibility of employing the voluntary labor of our white citizens in tropical agriculture becomes especially important from the consideration that the United States embrace the only portion of the world in which the best laborers and best institutions can be combined in the cultivation of tropical productions.<sup>20</sup>

He stated that this combination would compete so successfully that in a few years the West Indies would be

18. *Ibid.*, p. 52 ; 25th Cong., 2nd, *Sen. Doc. 300*, pp. 2-3.

19. *Ibid.*, 3.

20. Perrine to Louis McLane, Secretary of State, February 1, 1834, State Department Archives, Dispatches Received, Campeche, January 25, 1820-June 21, 1834, Vol. I.

smuggling in the lower priced sugar from the United States(!).

The agaves especially attracted Perrine, particularly the *Agave sisalana*. They had a great many uses in the tropics, but Perrine based his hope on the manufacture of the fiber. Many species of these plants were common in Mexico and Central America. One of these, the century plant, was utilized by the Mexicans for at least a dozen purposes. In 1833 he wrote the Secretary of State asking that the Government furnish transportation for a quantity of the agave plants from Yucatan to the southern extremity of Florida. He announced in the same letter that he had “. . . invented a method of separating the fibres from the leaves of the Henequen Agave, or plant which produces the material known in commerce under the name Sisal Hemp, by means of Rotary Scrapers. . . .” This invention, which he compared to Whitney’s cotton gin,<sup>21</sup> he expected to revolutionize the agriculture of the United States and of the world.<sup>22</sup> Had the agaves been introduced earlier into cultivation in South Carolina the difficult economic conditions back of the Ordinance of Nullification would never have existed ; consequently, Perrine argued, nullification would never have been attempted(!). He asked that he and his associates be granted a township; if this could not be done, they hoped legislation would enable them to purchase thirty-six sections of land in southern Florida on similar conditions to those under which the lands were sold to Dufour and his associates for the cultivation of the vine.<sup>23</sup> The Senate Committee on Agriculture in 1838 concurred with Perrine’s views in hoping that the agaves might be gradually acclimated over the southern states and expressed the view that agave fibers were “superior substitutes for flax and hemp.”<sup>24</sup>

21. Perrine to the Secretary of State, August 27, 1833, *ibid.*

22. Perrine to the Secretary of State, May 22, 1833, in State Department Archives, Dispatches Received, Campeche, January 25, 1820-June 21, 1834, Vol. I.

23. Perrine to the Secretary of State, August 27, 1833, *ibid.*

24. 25th Cong., 2nd, *Sen. Report 300*, p. 2.



A great many tropical plants other than the agaves attracted Perrine's attention. He first thought of the logwood trees in Yucatan<sup>25</sup> and suggested that a monopoly on logwood be established by plantings in the United States.<sup>26</sup> The demand for vegetable dyes caused him to study many other dye plants. Among these were the cochineal cactus with its insect parasite which produces a reddish dye, the "Shrub Indigo," the common indigo of Tabasco, and "a tree indigo." He sent seeds of these and of "nankeen colored cotton," the India rubber tree, the "Pasture tree," a soap tree (its saponaceous fruit was used as a substitute for soap), the "Purgative Pinon," "Spanish Cedar," a large ground gourd, tree-cotton, and others.<sup>27</sup> He planned to grow in Florida many plants which later attracted the interest of the Patent Office and of the Department of Agriculture. These included tea, olive, coffee, cocoanut, cacao, "the many-stemmed mulberry tree of Manilla and the tender silkworm of southern China," rubber producing plants, and various cacti. He planned to introduce edible fruits and plants including the pineapple tribe, cassava, bananas and plantains, pandanus palm, "the everbearing grapevine of Campeachy," the gomutus palm for fiber, sago, wine, sugar, thatch, and other products-, mangoes, the durian, the cherimoya, spondias, the mangosteen, sapotes, and the mamey apple. Spices, medicinal, and other plants to be introduced included black pepper, cinnamon, vanilla, ginger, tumeric, sarsaparilla roots, the pimiento tree, clover, nutmegs, arrowroot, medicinal aloes, jalap, ipecacuanha, cinchona, a fine flavored tobacco, and various plants for their timber, such as the "cedar of

25. Perrine to State Department, January 1, 1829, in 22nd Cong. 1st, *H. Doc. 198*, p. 10.

26. Perrine to State Department, May 8, 1832, in State Department Archives, Dispatches Received, Campeche, January 25, 1820-June 21, 1834, Vol. 1.

27. Perrine to the Secretary of State, October 24, 1831, in State Department Archives, Dispatches Received, Campeche, January 25, 1820-June 21, 1834, Vol. I.

Barbadoes," the habi of Campeachy-for shipbuilding-, and the brazilletto and logwood for hedges. <sup>28</sup>

In 1832 when Perrine first memorialized the United States Congress for a grant of land in the Territory of Florida the House passed a resolution on February 15 requesting information from the State Department regarding his activities. <sup>29</sup> The memorial and a resolution of the Legislative Council of the Territory of Florida recommending the grant ". . . for the encouragement of the growth of new and important agricultural products, exotic vegetables, and tropical plants. . ." were referred to the House Committee on Agriculture. The Committee reported and gave their reasons for favoring the enterprise.

The Greeks and Romans obtained at the public expense a number of grains, vegetables, and plants, from Africa; and all the modern States of Europe have made it one of the leading considerations of national policy, to promote new acquisitions to the agriculture as well as to the commerce of the country. <sup>30</sup>

The report also asserted that Florida was incapable of producing any article then cultivated in the United States. <sup>31</sup> The Committee determined to report a bill to set apart one township of the public lands on condition that he successfully occupy and cultivate the land for the avowed purposes. <sup>32</sup> Congress however failed to grant the land at that time. <sup>33</sup>

The House and Senate each originated bills early in 1838 for a land grant to Perrine and each published a report on his activities. <sup>34</sup> The two reports were very

28. 25th Cong., 2nd, *Sen. Doc. 300*, pp. 22-29.

29. 22nd Cong., 1st, *H. Doc. 198*, p. 1.

30. 22nd Cong., 1st, *H. Report 454*, p. 1.

31. *Ibid.* 2.

32. 22nd Cong., 1st, *H. Rep. 454*, p. 1.

33. 25th Cong., 2nd, *Sen. Doc. 300*, p. 4.

34. 25th Cong., 2nd, *H. Rep. 564* (February 17, 1838 ; to accompany bill H. R. No. 553) and *Sen. Doc. 300* (March 12, 1838; to accompany Senate Bill No. 241.)

similar and each consisted of letters submitted by Perrine in regard to his previous services to agriculture. Either *Report* is a compilation of letters, articles, endorsements and information on Perrine, on the soil and climate of southern Florida and on the subject of tropical plants. In detail and volume, in fact and argument, they offered support to the bills under consideration. The House *Report* shows that he had the backing of newspapers and journals, including *The Southern Agriculturist*, and of a resolution of the General Assembly and the Governor of Louisiana.<sup>35</sup> There is a detailed report with tables showing daily weather records for an entire year in southern Florida.<sup>36</sup> The Senate *Report* showed that

At the express desire of the memorialist, your committee has long delayed its action for the purpose of making a rigid investigation of his suggestions, his services, and his plans in relation to the immediate domestication of tropical plants in southern Florida, and of their gradual acclimation throughout all the southern and southwestern states; and hence your committee has arrived at the conclusion that his services have been great; that his suggestions are important, and that his plans are laudably patriotic and practicable. In obedience to the Treasury circular of the 6th of September, 1827, Dr. Henry Perrine appears to be the only American consul who has perseveringly devoted his head, heart, and hands to the subject of introducing tropical plants in the United States; and his voluminous manuscripts alone exhibit a great amount of labor and research which promise to be highly beneficial to our common country.<sup>37</sup>

The grant became law July 7, 1838. The preamble gave the reasons - a digest of Perrine's arguments-

<sup>35</sup> 25th Cong., 2nd, *H. Rep.* 564, pp. 37-38.

<sup>36</sup> *Ibid.*, 63-67.

<sup>37</sup> 25th Cong., 1st, *Sen. Rep.* 300, p. 1.

for passing the law. The grant was a township-23,040 acres-to Perrine and his associates “. . . to be located in one body of six miles square, upon any portion of the public lands below twenty-six degrees north latitude.” It was to be occupied within two years, and each section had to be occupied within eight years from the date of the location of the tract by an actual settler cultivating useful tropical plants, otherwise the land would be forfeited.<sup>38</sup>

Perrine received further support from the Legislative Council of the Territory of Florida in 1840 as indicated by the following resolution.

Resolved, that our Delegate in Congress be requested to urge upon the Secretary of the Navy the propriety of issueing an order to the commanders of vessels of war of the United States, when ordered on foreign service, that they shall take on board all valuable tropical plants which can be domesticated in Florida, particularly the sisal Hemp, the manilla hemp, Banana and New Zealand Flax, Lilly, and on their arrival in the United States, they shall send them by safe conveyance to Dr. Henry Perrine, the superintendent of the Tropical plant company, at Indian Key, South Florida.<sup>39</sup>

Perrine had apparently planned to spend the rest of his life at Indian Key with his plant work. He moved his family with him from New York to Florida in December 1838 and landed on Christmas morning at Indian Key, an island of about twelve acres. He went against the advice of the Secretary of War, Joel R. Poinsett, who warned him that the Indians were again at war. Perrine considered Indian Key secure enough and decided to stay there until the Indians were quieted on the mainland. He had previously established at Indian

38. *U. S. Statutes at Large*, 302.

39. Territory of Florida, Legislative Council, 18th Session, *Journal* (Report of the select committee to whom was referred the petition of Henry Perrine), 142-143.

Key a depot for his plants under the care of Charles Howe. Henry Perrine was shot and his home and valuable notes and papers were burned by a war party which surprised the family on the night of August 7, 1840. His family miraculously escaped to tell the story.<sup>40</sup>

It is not likely that Perrine ever would have achieved results commensurate with his zealotry. His machine for separating the agave fibers did not come up to his expectations. Numerous later attempts by others to found fiber crop industries still await success. There were too many opportunities in other economic pursuits for high-priced American labor to compete with low-paid fiber producers in Mexico and Central America, although Perrine hoped to overcome this problem by invention. The nature of the work of plant introduction and the establishment of a new agricultural crop is such that ordinarily an individual is not able to succeed. It is a task for governments. Long experience with a new industry is necessary, much time is required for the development of a market for a new product, and too much time and expense are required for the individual to realize a quick profit on his investment. Although risks of devastating losses are taken by the individual who invests his capital in new crops in the face of unknown costs and of an unpredictable market, great long-run benefits may accrue to the public.

### *Summary*

In summary of the final results of his efforts, it may be said that Perrine had done a great deal of work at great expense to himself; much interest was aroused in the country, and nearly two hundred varieties of tropical plants had been imported by him. He had made sisal planting on every section of the grant before he had to withdraw to Indian Key. Most of Perrine's plants were destroyed in the fire and massacre when Perrine lost

40. Hester Perrine Walker, "Massacre at Indian Key, August 7, 1840, and the Death of Dr. Henry Perrine," in *The Florida Historical Society Quarterly*, V, (July, 1926), 19.

his life. Many of his plants were carried later to other parts of Florida and to other states by Army officers who sent them to Army posts as ornamentals or to greenhouses in the North.<sup>41</sup> The extent of Perrine's transplants is indicated by his plans to charter a ship for this purpose at one time and, in another instance, his solicitation, as previously noted, of the cooperation of the vessels of the Navy. His attitude in plant introduction as in medicine had been philanthropic.<sup>42</sup> The location of his land was an excellent choice climatically; the present tropical plant introduction garden of the Department of Agriculture at Coconut Grove, Florida, is located next to the site of his grant.

41. United States Department of Agriculture, *Annual Report of the Secretary, 1891*, pp. 417-418.

42. Soon after his death short biographical sketches of Perrine were published in the *Western Journal of Medicine and Surgery* (Louisville, Kentucky), 1840, pp. 321-323, in Toner Collection, Library of Congress (clipping) and in *The Cultivator* (Albany), VII, (December, 1840), 186.

*Note.* In addition to the sources referred to in this article see: *Proceedings of the Florida State Horticultural Society, 1937*, "Henry Perrine, Pioneer Horticulturist of Florida," by T. Ralph Robinson; *Ibid.* (1938) "Further Notes on the Perrine Episode" by the same author; and by the same author, "Perrine and Florida Cotton Tree" in *Tequesta, The Journal of the Historical Association of Southern Florida*, Number seven, 1947. *Ed.*