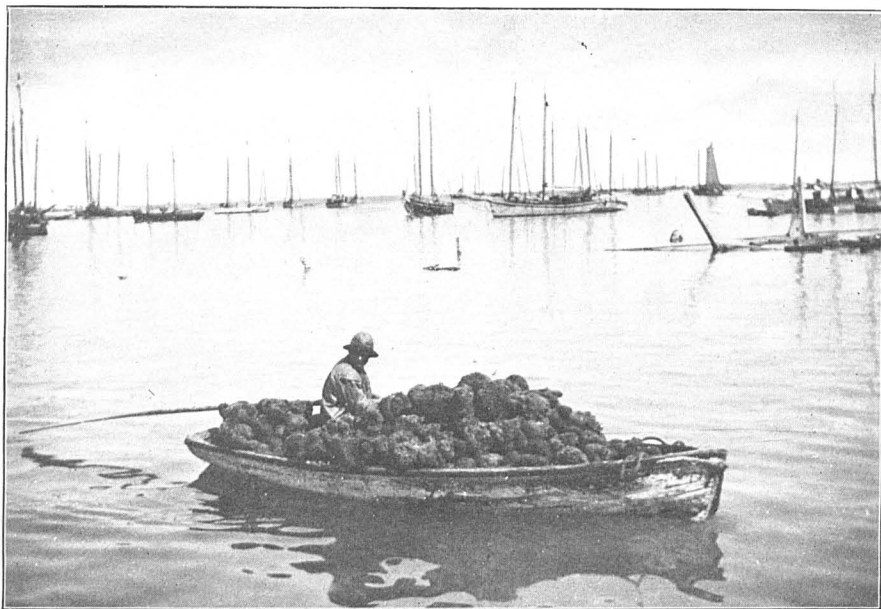

THE SPONGE FISHERY OF FLORIDA IN 1900.

BY

JOHN N. COBB,

Agent of the United States Fish Commission.



BRINGING SPONGES FROM THE VESSELS TO SPONGE WHARF AT KEY WEST.



A SPONGE AUCTION AT ANCLOTE.

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In 1901 the writer was detailed to make an investigation of the commercial aspects of the fishery, and the following notes give complete data showing its condition in the calendar year 1900:

GROUND, VESSELS, METHODS OF THE FISHERY, ETC. ^a

There are two well-defined areas of the Florida coast in which sponging is prosecuted.

A chain of "keys," or islands, starts from the mainland at about Miami, on the east coast, and extends, in the shape of a horn, far into the Gulf of Mexico, the Dry Tortugas being the westernmost point of the horn. In the waters surrounding most of these keys, and also between the keys and the mainland as far as Cape Sable, sponges are found. This is called the "key grounds" and is worked exclusively by spongers from Key West and the few inhabitants of the many keys. The earliest sponging was on these grounds.

The "bay grounds," which are the most prolific, are on the west coast, in the Gulf of Mexico, and extend from Johns Pass, a few miles north of the entrance to Tampa Bay, to St. Mark's light-house, a distance of about 200 miles. Sponges are also found in the Gulf between Tampa Bay and Cape Sable, but not in sufficient quantities to justify making trips specially to this region.

The sponges taken from these grounds are classified as follows by the spongers and buyers: Sheepswool, yellow, grass, velvet or boat, and glove. A few other unimportant kinds, such as "wire," "hardhead," etc., are generally included with those previously mentioned.

Vessels of a schooner or sloop rig, ranging from 5 to 46 tons (averaging slightly over 11 tons), operate chiefly on the "bay grounds," while small sloops, usually of less than 5 tons burden, work mainly on the "key grounds." The larger vessels, which average about \$1,168

^aNo effort has been made to give these subjects in detail, as they have been covered in other reports, to which the reader is referred as follows:

The Fisheries and Fishery Industries of the United States. Tenth Census of the United States.
The Fish and Fisheries of the Coastal Waters of Florida. Rep. U. S. Fish Com. 1896, pp. 263-342.
The Florida Commercial Sponges. By Hugh M. Smith. Bull. U. S. Fish Com. 1897, pp. 225-240, 19 pls.

Notes on the Florida Sponge Fishery in 1899. By Hugh M. Smith. Bull. U. S. Fish Com. 1899, pp. 149-151.

in value, exclusive of outfit, carry from 5 to 13 men, while the smaller vessels, which average in value about \$780, including outfit, carry crews of from 3 to 5 men.

The larger Key West vessels make three to four trips per year to the "bay grounds," and some of them make one or two trips to the "key grounds." Each "bay" trip occupies about two months, while the "key" trip is made in about a month. The Tarpon Springs and Apalachicola vessels average about five trips each year, each trip occupying about two months. None of these latter vessels visits the "key grounds."

The "bay" trips are usually arranged as follows:

The first trip begins about the first week of January, and ends from the 10th to the 20th of March, the spongers working from the mouth of Anclote River to St. Martins Reef, about 40 miles. Many of the vessels do not make this trip, as the weather is usually cold and windy.

The second trip begins about April 1 and ends from the 10th to the 20th of June. The grounds between Johns Pass and Cedar Key are visited during this trip.

The next trip begins about July 1 and ends from the middle of August to the 1st of September, and is also carried on between Johns Pass and Cedar Key. This is usually the best trip of the year.

The fourth trip is called the "hurricane trip," from the fact that it is prosecuted during the hurricane season, and lasts from the middle of August to about the 10th of October, the same grounds being visited as on the two previous trips.

The last trip usually begins the early part of November and ends December 20, the Rock Island grounds being visited.

A number of the vessels refit previous to the last trip, while others wait until the first two months of the year for this purpose.

The crews work on shares. The owner, or "outfitter," furnishes the food, fuel, boats, apparatus, etc., for the trip. While sponging in the "bay" each member of the crew is assessed 35 cents per trip for watchman's fee at the "kraals," and 50 cents per trip for wood. After deducting these two items from the gross proceeds of the trip, the vessel takes half of the remainder, and the other half is divided up equally among the crew. Besides his regular share with the crew, the captain gets 10 per cent of the vessel's share, and each "hooker" gets one-fourth of one share from the vessel's portion. Should the captain also be a "hooker," which is generally the case, he only gets his regular 10 per cent.

The same division of proceeds is followed on the "key" trips, except that there are no charges for watchmen and for wood. The men generally camp on the keys where wood and water are convenient, and as settlers are scarce in this region the "kraals" do not have to be guarded.

The only apparatus used in this fishery is the sponge hook, a three-toothed curved hook attached to poles of varying lengths, according

to the depth of water in which the sponger is working, and the sponge glass—a common water bucket with the bottom knocked out and a pane of window glass substituted. The latter is used for seeing below the surface when the water is disturbed by ripples.

A sponge “kraal,” or pen, is generally about 10 feet square, built of wattled stakes, and is placed in shallow water in the shelter of some key or island. Each vessel usually owns one, and for better protection from thieves, a number of them are congregated at some convenient place and a watchman employed to guard them. For a number of years many of the “bay” spongers had their kraals at the north end of Anclote Key. As these were exposed to the full force of the wind when blowing from certain directions, considerable loss was sustained on several occasions by the storms washing the sponges out of the kraals and carrying them out to sea. Owing to this the kraals were removed in 1890 to Baileys Bluff, on the mainland about 2 miles north of the mouth of Anclote River. In 1900 certain of the spongers became dissatisfied and established kraals at Sawyers, about half a mile nearer the Anclote River. The latter are sometimes called the “Cabbage kraals,” from a large cabbage palm standing on the beach just opposite the kraals. At Baileys Bluff there are about 85 kraals, while at Sawyers there are about 40. A few kraals are also located at North Key, close to the town of Cedar Key. This was at one time a very important kraaling place.

“Kraals” were also located at Rock Island and near St. Mark’s light-house at various times.

The key spongers build their kraals at various places, no effort being made to keep them together, as in the “bay.” The spongers usually select a convenient key and make their camp on shore, and build their kraal in some sheltered cove close to the shore. They suffer very little from thieves, so do not require watchmen. Should the key have any inhabitants, these usually watch over the kraal.

When first brought to the surface the sponges are black and slimy. As soon as a dingy has secured a load it is sculled to the vessel, unless the latter is too far away, when she sails down to the boat, and the load is transferred to the deck of the vessel. They are then spread carefully over the deck in their natural upright position so as to allow the slimy matter, or “gurry,” to run off easily. At first they have a strong ammoniacal smell, exceedingly disagreeable to those unaccustomed to it; but this is soon succeeded by a scent very similar to that of decaying seaweed. After several days’ exposure on the deck the sponges die and a good part of the “gurry” runs off. In the “bay” the vessels usually return to the kraals every Friday. The sponges are then transferred from the vessel to the kraal, where they are allowed to soak until the vessel returns from the next week’s trip. Those brought in the previous week are then beaten out with a short, heavy stick, which removes most of the slime and animal matter still

remaining in them, while those to which the black scum still adheres are scraped with a knife. The sponges are then squeezed out quite thoroughly with the hands, after which they are removed to the shore and strung on pieces of coarse twine about 6 feet in length, in which shape they are ready for sale. All sponges are sold by auction.

SPONGES GATHERED IN FOREIGN WATERS.

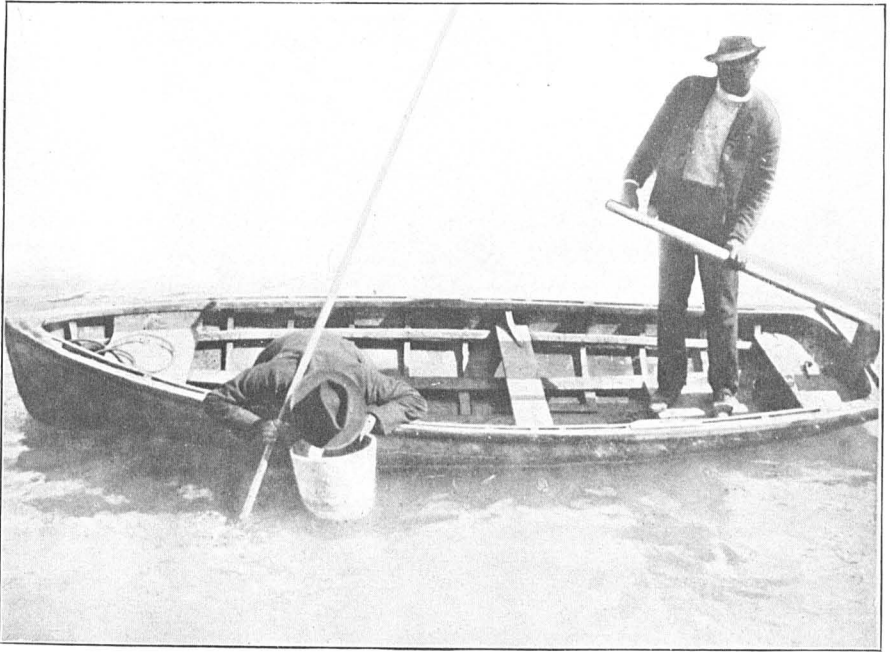
In September, 1900, the schooner *Serafina C.*, of Key West, made a trip to the Mosquito Coast of Nicaragua, and brought back about 1,016 pounds of sheepswool sponges and 44 pounds of velvet sponges. Most of these were taken in water shallow enough to permit of the sponges being secured by wading. No effort was made to gather other kinds, as they would not have sold for enough to pay for the collecting. The sheepswool and velvet sponges were of an inferior grade. On landing the sponges at Key West they were compelled to pay duty on them. Owing to the success of the *Serafina C.* several other vessels have since been working on these grounds. For some years past Key West vessels have made occasional visits to these grounds, the schooner *Sea Gull* having been wrecked while returning from such a trip in 1886.

Shortly after the close of the Spanish war one or two of the vessels visited Cuba and brought back a few sponges. These were not gathered by the crew, however, but were purchased from the natives. As they were of an inferior grade, and duty had to be paid upon them, no effort was made to continue the business.

PREVIOUS ABUNDANCE.

The four tables given below show for a series of years the catch of the sponge fleet by places, by kinds, the average price per pound, and the relative importance of the different kinds in percentages of the total quantity and value of the crop. In these the overwhelming preponderance of Key West is very evident. Cedar Key and St. Marks have dropped out of the fishery entirely, while Tarpon Springs and Apalachicola have decreased slightly since 1897 so far as the quantity is concerned. The catch for 1900, in both quantity and value, exceeded that for any other year for which figures are available. The catch of sheepswool sponges for 1900 is lower than for 1895, but higher than for the other years. The value of this kind has increased very much, however. The catch of yellow sponges increased nearly 90 per cent, while the catch of grass sponges has almost doubled since 1899.

In the table showing the average price per pound the most noticeable features are the great increases in value of the sheepswool and the yellow sponges. While the sheepswool has been steadily increasing in value for years, the yellow suddenly jumped from 29 cents per pound in 1899 to 59 cents in 1900, which is the highest ever known. In 1901 they soared even higher yet, some lots being sold on the Key West sponge wharf for an average price of about \$1 per pound. This



SPONGERS AT WORK.



SPONGE YARD AT KEY WEST, SHOWING THE SPONGES DRYING.

IMPORTS AND EXPORTS OF SPONGES.

As the yield of domestic sponges is not equal to the demand, large quantities are imported each year, the greater part of these coming from the Bahama Islands, Cuba, Haiti, Greece, Austria-Hungary, and Turkey. During the fiscal year ending June 30, 1900, the imports of foreign sponges amounted in value to \$536,303, almost as much as the value of the catch of domestic sponges for the calendar year 1900, which was \$567,685. During 1900 we exported 71,642 pounds of domestic sponges, valued at \$32,199, most of which went to Great Britain, Germany, Netherlands, Belgium, and France. Most of these were grass sponges, for which there is very little demand in this country. We also exported \$84,100 worth of foreign sponges which had been previously imported. Except in the imports during 1900 there has been very little fluctuation during the last three years. The following table shows the imports and exports for the fiscal years 1896, 1897, 1898, 1899, and 1900:

Table showing the imports and exports of sponges in 1896, 1897, 1898, 1899, and 1900.

Fiscal year.	Imports of foreign sponges.	Exports of domestic sponges.		Exports of foreign sponges.
		Lbs.	Value.	
1896.....	\$199,766	36,398	\$14,237	\$73,704
1897.....	487,143	125,492	53,962	75,007
1898.....	401,725	75,819	31,517	89,192
1899.....	430,231	71,657	26,452	92,664
1900.....	536,303	71,642	32,199	84,100

STATISTICS OF THE FISHERY.

The season of 1900 was one of the best that the spongers have had for years. Owing to the unusual clearness of the water on the "key grounds" the spongers were enabled to work over almost all the grounds, a thing which has not happened for some years. This was especially noticeable around Sandy Key, near Cape Sable. Usually yellow, muddy water is found stretching out for about 40 miles in every direction from this key, except toward the mainland, which is about 4 miles distant, and from a distance the surface looks like a light yellow mud bank exposed at low water after the mud has had time to dry. Last season was the first time in about fourteen years in which the spongers were enabled to work this section. A noticeable feature was the unusual number of rotten sponges gathered on this ground. No sign of this rot appeared on the surface of the sponge, but after it had been cleaned it could easily be seen by pulling aside the fiber at the bottom. In some of them the whole inside had been rotted away while the exterior presented a clean, healthy appearance.

The tables show the condition of the industry for 1900. The great preponderance of Key West is very noticeable in all of the tables,

and this place leads in persons engaged in all branches of the business, with a total of 1,827 persons. Tarpon Springs is second, with 354.

An interesting table is the one showing the color and nationality of the persons engaged in the business. Among the spongers themselves the colored people predominate, there being 1,356 engaged, while the whites number 757. This disproportion is especially high at Key West. Among persons employed exclusively on shore the whites predominate, with 119 to 13 colored. Of 2,113 persons employed directly in sponging, 1,268 are British provincials, mostly from the Bahamas; of these, 1,013 are colored. The native-born Americans numbered 839, of whom 343 are colored. One Norwegian and 5 Portuguese are also engaged in the business. Among the shore employees the native-born Americans lead, with 114, of whom 13 are colored. The British provincials numbered 17, all white. There was also 1 Greek.

In the matter of vessels, boats, apparatus, and shore and accessory property, Key West far exceeds all the others combined, with a total investment of \$518,932. Tarpon Springs is second, with \$65,014, followed by Apalachicola, with \$10,652. The total investment for the fishery amounts to \$594,598. The Key West fleet shows a most gratifying increase since 1895. In the latter year there were 99 vessels of over 5 tons, and 185 vessels under 5 tons measurement hailing from this place, while in 1900 there were 136 vessels of over 5 tons and 183 vessels of under 5 tons measurement, a gain of 37 vessels of over 5 tons and a loss of 2 vessels under 5 tons. So far as vessels of over 5 tons are concerned, Tarpon Springs has practically held her own, while Apalachicola has dropped off considerably, but in the matter of vessels under 5 tons Tarpon Springs has made a considerable increase.

Key West leads in the catch of all kinds of sponges with 359,854 pounds, valued at \$488,744, followed by Tarpon Springs with 53,173 pounds, worth \$70,320, and Apalachicola with 5,098 pounds, valued at \$8,621. All the glove and velvet sponges were taken by Key West vessels. The total catch amounted to 418,125 pounds, valued at \$567,685.

An interesting feature is the showing of the catch by kinds and grounds. The "key grounds" were worked exclusively from Key West and the surrounding keys. The total catch from the bay grounds amounted to 228,461 pounds, valued at \$389,890, and for the key grounds 189,664 pounds, worth \$177,795. Sheepswool sponges are more frequent on the "bay grounds" than on the key grounds, while the reverse is the case with yellow sponges. The grass-sponge catch is almost equally divided between the two grounds. Very few glove and velvet sponges are taken on the "bay grounds."

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Table showing, by places, the persons employed in the sponge fishery in 1900.

	Key West.	Tarpon Springs.	Apalachicola.	Total.
Vessel fishermen.....	1,080	120	39	1,239
Boat fishermen.....	669	180	25	874
Shore employees.....	78	54	.....	132
Total.....	1,827	354	64	2,245

Table showing the nationality and color of persons engaged in the sponge fishery in 1900.

Nationality.	Key West.	Tarpon Springs.	Apalachicola.	Total.
Vessel fishermen:				
Americans, white.....	240	26	30	296
Americans, colored.....	120	54	6	180
British provincials, white.....	144	8	2	154
British provincials, colored.....	576	32	1	609
Total.....	1,080	120	39	1,239
Boat fishermen:				
Americans, white.....	146	40	14	200
Americans, colored.....	77	80	6	163
British provincials, white.....	90	11	.....	101
British provincials, colored.....	356	48	.....	404
Norwegians.....	.....	1	.....	1
Portuguese.....	.....	.....	5	5
Total.....	669	180	25	874
Shore employees:				
Americans, white.....	55	46	.....	101
Americans, colored.....	7	6	.....	13
British provincials, white.....	15	2	.....	17
Greeks.....	1	.....	.....	1
Total.....	78	54	.....	132
Grand total.....	1,827	354	64	2,245

Table showing, by places, the vessels, boats, apparatus, and shore property employed in the sponge fishery in 1900.

Items.	Key West.		Tarpon Springs.		Apalachicola.		Total.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels.....	136	\$167,170	15	\$11,831	5	\$3,150	156	\$182,151
Tonnage.....	1,584	.....	129	.....	37	.....	1,750	.....
Outfit.....	.....	100,950	.....	11,103	.....	3,446	.....	115,499
Boats.....	183	146,450	40	28,100	5	3,915	228	178,465
Apparatus used in vessel fisheries.....	.....	2,704	.....	358	.....	96	.....	3,153
Apparatus used in boat fisheries.....	.....	2,458	.....	720	.....	45	.....	3,223
Shore and accessory property.....	.....	99,200	.....	12,907	.....	.....	.....	112,107
Total.....	.....	518,932	.....	65,014	.....	10,652	.....	594,598

aIncludes value of outfit.

Table showing, by kinds and places, the catch of the sponge fleet in 1900.

Kinds.	Key West.		Tarpon Springs.		Apalachicola.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Sheepswool.....	157,680	\$413,629	20,995	\$61,866	2,636	\$7,768	181,311	\$483,263
Yellow.....	66,537	40,080	6,727	3,364	1,202	601	74,466	44,045
Grass.....	116,401	27,921	25,451	5,090	1,260	252	143,112	33,263
Glove.....	12,428	1,794	.....	.....	.....	.....	12,428	1,794
Velvet or boat.....	6,808	5,320	.....	.....	.....	.....	6,808	5,320
Total.....	439,854	488,744	53,173	70,320	5,098	8,621	418,125	567,685

aIncludes 1,016 pounds of sheepswool, valued at \$1,366, and 44 pounds of velvet, valued at \$34, from the Nicaraguan coast.

Table showing, by places, kinds, and grounds, the catch, by vessels and boats, in the sponge fishery in 1900.

Kinds and grounds.	Key West.		Tarpon Springs.		Apalachicola.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Catch by vessels on bay grounds:								
Sheepswool.....	79,466	\$229,401	12,572	\$37,046	1,640	\$4,834	93,678	\$271,281
Yellow.....	19,269	11,305	3,168	1,581	618	309	23,065	13,198
Grass.....	35,785	8,140	10,926	2,185	780	156	47,491	10,481
Glove.....	948	134					948	134
Velvet or boat.....	386	64					386	64
Total.....	135,854	249,044	26,666	40,815	3,038	5,299	165,558	295,158
Catch by vessels on key grounds:								
Sheepswool.....	19,199	41,856					19,199	41,856
Yellow.....	14,932	8,603					14,932	8,603
Grass.....	23,122	5,778					23,122	5,778
Glove.....	3,748	542					3,748	542
Velvet or boat.....	2,141	1,752					2,141	1,752
Total.....	63,142	58,531					63,142	58,531
Catch by boats on bay grounds:								
Sheepswool.....	19,674	57,009	8,423	24,820	996	2,934	29,093	84,763
Yellow.....	5,235	2,827	3,559	1,780	584	292	9,378	4,899
Grass.....	9,190	2,035	14,525	2,905	480	96	24,195	5,036
Glove.....	237	34					237	34
Total.....	34,336	61,905	26,507	29,505	2,060	3,322	62,903	94,732
Catch by boats on key grounds:								
Sheepswool.....	39,341	85,363					39,341	85,363
Yellow.....	27,101	17,345					27,101	17,345
Grass.....	48,304	11,968					48,304	11,968
Glove.....	7,495	1,084					7,495	1,084
Velvet or boat.....	4,281	3,504					4,281	3,504
Total.....	126,522	119,264					126,522	119,264
Grand total.....	359,854	488,741	53,173	70,320	5,098	8,621	418,125	567,685

^aIncludes 1,016 pounds of sheepswool, valued at \$1,366, and 44 pounds of velvet, valued at \$34, from the Nicaraguan coast.

The following table shows the average price per pound received for each kind from the various grounds. The "bay" sheepswool are much more valuable than the "key" variety, while the "key" yellow, grass, and velvet are all more valuable than those from the "bay." There is no difference in the value of the glove sponges from either ground. The general average price was \$1.36.

Kinds.	Lbs.	Value.	Average price per pound.
"Bay" sheepswool.....	123,017	\$356,045	\$2.89
"Key" sheepswool.....	58,294	127,218	2.18
"Bay" yellow.....	32,433	18,097	.55
"Key" yellow.....	42,033	26,948	.62
"Bay" grass.....	71,086	15,516	.22
"Key" grass.....	71,426	17,747	.25
"Bay" velvet or boat.....	386	64	.17
"Key" velvet or boat.....	6,422	5,236	.82
"Bay" glove.....	1,185	163	.14
"Key" glove.....	11,243	1,626	.14
	418,125	567,685	1.36

Heretofore the law in regard to the gathering of sponges less than 4 inches in diameter has been more honored in the breach than in the observance. This was largely owing to the fact that the law did not

prohibit the sale of such sponges or the having of them in possession. The law was amended in 1901 to cover these points, and will doubtless prove useful in protecting the small sponges from the depredations of the spongers, if properly enforced.

DISASTERS TO THE FLEET.

The spongers have not been exempt from the many perils of the deep, as is well shown by the following brief record of the principal disasters to the fleet since 1880:

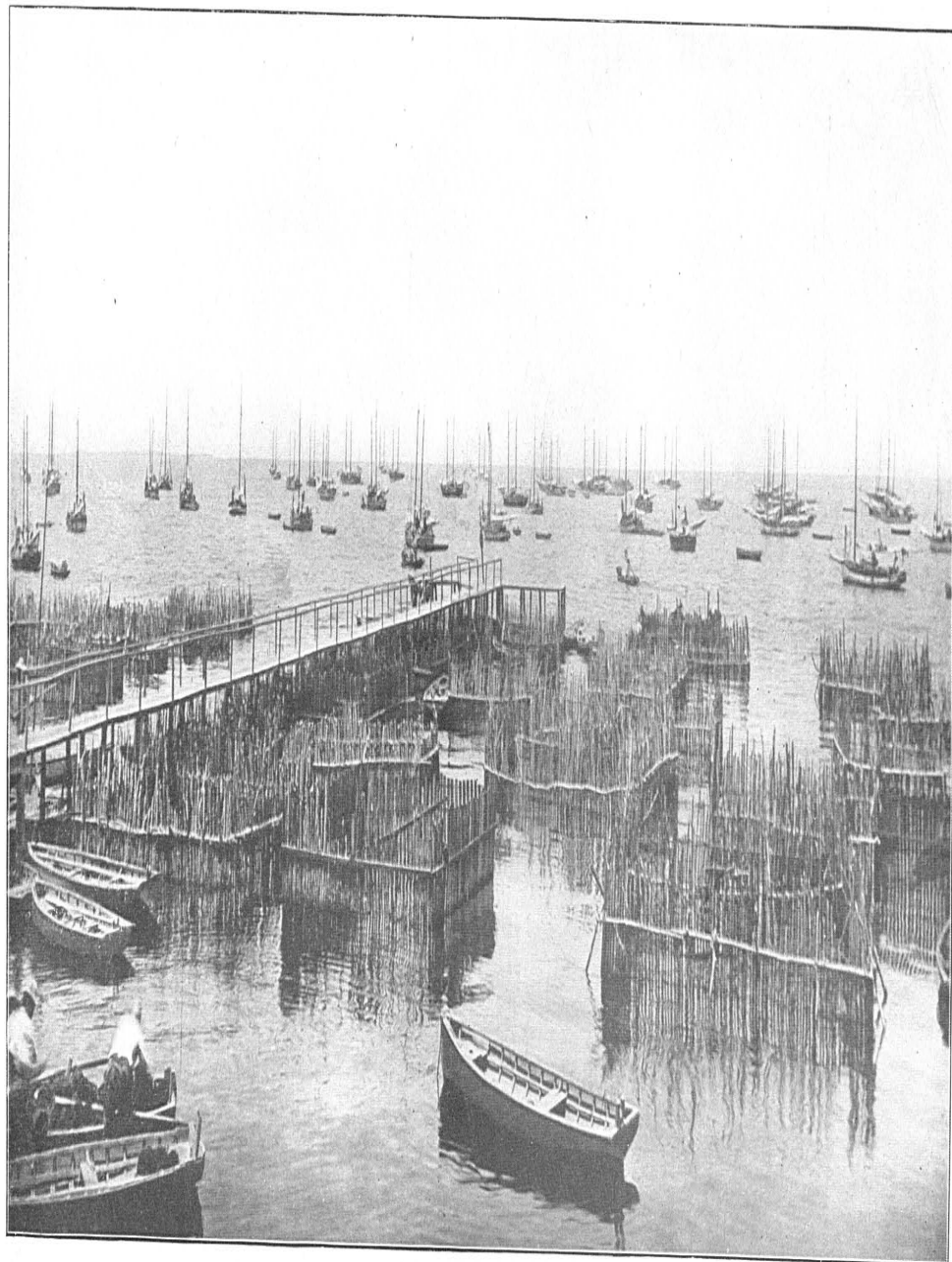
Year.	Vessel.	Remarks.
1882....	Minnie	Struck on bar near Stump Pass.
1886....	Sea Gull	Capsized by cyclone near Cuba while on her way back from sponging trip to Nicaragua; 7 lives lost.
1892....	Ethel	Struck a drift log and foundered.
1893....	Silver Spray	Burned.
1894....	Adelaide	Capsized at Peckles Reef in gale.
1895....	Marion, Rosalie, Euphemia, and Ada Norman.	Carried by cyclone up into the woods, near Cedar Key.
1896....	Shamrock	Capsized near Sea Horse Key; 6 men lost.
	Competitor	Captured by Spanish gunboat while carrying cargo of contraband goods to Cuban insurgents. Crew condemned to death, but saved through intervention of United States.
1897....	Rosalie	Capsized during cyclone; 4 of her crew lost.
	Euphemia	Capsized in gale.
1898....	Speedwell	Capsized near Marques Keys. Had just been launched and was getting ready to go into sponging; 9 persons lost.
1899....	Amanda Rosalie	Stranded during heavy blow.
1900....	Vim	Beached.
	Evening Star	Struck on St. Martins Reef.
	Lone Star	Struck a rock near Anclote and was sunk.

SPONGE BUYING.

The buying of sponges gathered by the Florida fishermen has developed into a business of considerable magnitude and one quite distinct from that of the gathering of sponges.

When the sponges are landed by the fishermen they have merely been roughly cleaned of the mud and dirt adhering to them, and it is necessary, before they can be placed on the market, to thoroughly clean them of the remaining dirt, see that no foreign substances are inside the sponge, and trim off the rough edges to give a symmetrical appearance. This work is done by the buyers, who have large warehouses at convenient places on the coast.

For many years Key West had almost a monopoly of this business, but in 1891 serious competition began at Tarpon Springs. Owing to the favorable situation of this latter place the business here rapidly expanded until in 1900 it amounted to almost as much as at Key West. The Spanish-American war was a great help to Tarpon Springs, as the Key West vessel captains avoided going to Key West with their cargoes for fear of being captured by Spanish war vessels, and so were constrained to sell at Tarpon Springs. During 1899 and 1900 a few sponges were sold at Lemon City, on the east coast. Some of the "key" boats from the upper part of Biscayne Bay found it more convenient to sell to the one buyer there than to make the long trip to Key West. The business did not thrive, however, as the spongers do



VESSELS AND KRAALS AT BAILEYS BLUFF.

not like to sell at a place where there is but one buyer, as they claim the lack of competition keeps the price down. None was sold at Lemon City after the spring of 1900.

At Key West and Tarpon Springs all of the buyers, except two—one at each place—represent New York, Philadelphia, and St. Louis wholesale houses. The two independent buyers market their own catch. Each buyer has a warehouse where the sponges are dried, cleaned, and baled ready for market. Some of these buildings are elaborate and costly structures, and a number of persons are employed at each in preparing the product. In 1900 the Key West establishments, which were valued at \$90,400, employed 67 persons, whose wages amounted to \$25,978. At Tarpon Springs, in the same year, the sponge establishments were valued at \$9,332, and gave employment to 57 persons, whose combined wages amounted to \$17,969. Property is much less valuable at Tarpon Springs than at Key West, which explains the great difference between the two places. The employees come under three classes, viz, "clippers," who clip the sponges and sort them; the "pressmen," who bale the sponges, and the draymen and common laborers. The "clippers" are paid about \$1.50 per day, the "pressmen" about \$2 per day, and the draymen and laborers about \$1 per day. At Key West very few buyers own drays, preferring to hire them when needed.

Burlap, which costs about 10 cents per yard, delivered, and jute rope, with diameters of one-fourth and three-eighths inch, worth about 7½ cents, delivered, are used in baling the sponges. Formerly sisal rope was employed, but as it was found that jute rope could be secured at a much lower price, and would answer the purpose, the latter is now used almost exclusively.

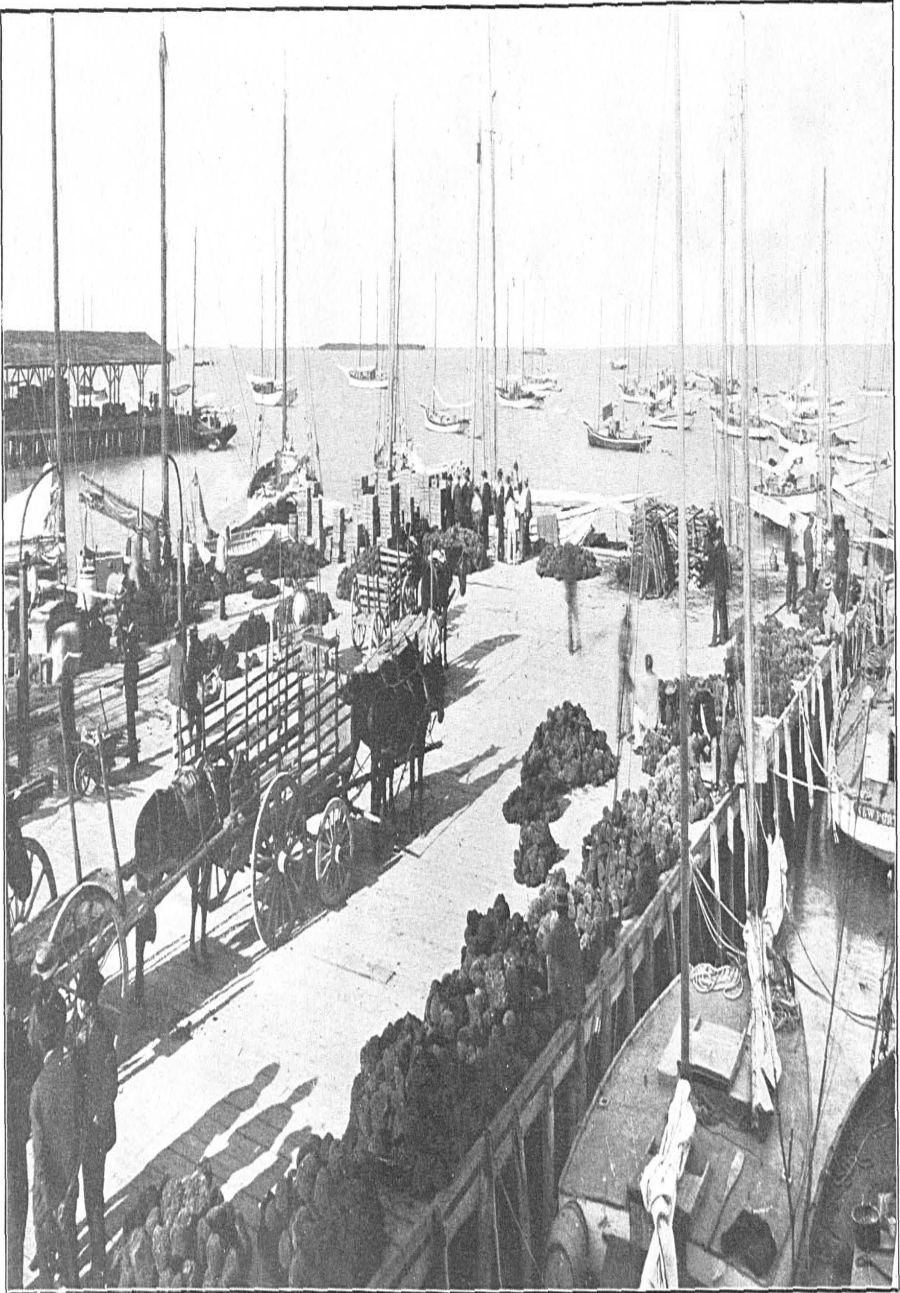
In baling each kind is kept by itself. For the general trade sheepswool sponges are packed in 15, 30, and 50 pound bales. The medium-size sponges are placed in the 15 and 30 pound bales and the large ones in the 50-pound bale. The yellow sponges are packed in 30, 40, and 50 pound bales; the medium size in the 30-pound bale, and the larger sizes in the 40 and 50 pound bales. The grass sponges are generally packed in 50-pound bales, while the velvet and glove sponges are packed in 30 and 50 pound bales. The above weights represent the net weight of the sponges in each bale. The burlap, rope, and twine usually adds about 2 pounds to the net weight of each bale. Bales weighing differently from the above are also put up, but only for special orders. In baling the sponges presses, very much resembling cotton compresses, are used. The screw is purchased, but the framework is erected and the screw adjusted at the warehouse.

The great evil in the sponge business at the present time is the loading of sponges. Sheepswool sponges are nearly all loaded, while occasionally lots of yellow and grass sponges are also adulterated in this way. The loading is done for the purpose of increasing the

weight of the sponge. Rock salt, glucose, molasses, lead, gravel, sand, and stones are the substances generally used. Most of the warehouses have water-tight bins in which glucose or molasses, sand, and rock salt are mixed together in water. According as more or less weight is desired, the quantity of certain of the ingredients is increased or decreased. The sponges are thoroughly soaked in this preparation and are then run through an ordinary clothes-wringer, or laid on an inclined rack and allowed to drain into the bin. Some years ago the loading of sponges was quite common, and became such an evil in the trade that an agreement was made by the dealers that loading would be abandoned. This agreement was lived up to until within the last two or three years, when certain dealers resumed the practice. As the loading enabled the buyers to pay more for their sponges and still not increase the price to their customers, the buyers who had not taken it up were compelled to do so in self-defense. Most buyers would gladly abandon the loading if the agreement was made unanimous.

No sponges are bleached at the warehouses in Florida, this part of the business being done at the wholesale houses or by the jobbers in the trade. Small sheepswool sponges are quite generally bleached, as it gives them a better color. The bleaching of the yellow sponge, and the consequent great improvement in its hitherto poor color, has made it more attractive, and the increase in its value during the past year has been quite remarkable. Owing to the prevailing high prices for sheepswool, it is supplanting the latter for many purposes. In bleaching, lime and acids are used. This bleaching undoubtedly injures the sponges, as it weakens the fiber and considerably shortens the period of its usefulness. The spongers bleach a few sheepswool. They are usually washed in soapy water and, after being covered with soapsuds, are hung up on poles on shore or on the masts of the boats. The action of the nightly dews and the sunlight in conjunction with the soapsuds bleaches them to a beautiful white or golden color in one or two weeks. This manner of bleaching preserves the fiber of the sponge intact, and it is as durable when bleached as before. These sponges are either given away by the spongers or sold to the merchants in Key West, who sell them to tourists.

The two following tables show the condition of the sponge-buying business during 1900, and the rapid increase in the quantity of sponges bought at Tarpon Springs. In 1895 there were three buyers at this place and the total value of the sponges purchased amounted to \$60,000. In 1900 there were six buyers and their combined purchases amounted to \$278,550, an increase of three buyers and \$218,550 in value. In 1895 Key West had nine buyers, who purchased \$312,020 worth of sponges, while in 1900 there were eleven buyers, an increase of two, and the combined purchases amounted to \$289,135 in value, a decrease of \$31,865 in value. The decrease at Key West would



THE SPONGE AUCTION WHARF AT KEY WEST.

undoubtedly have been greater had it not been for the exceptionally good catches on the "key grounds" during 1900. All the "key" sponges are sold at Key West and will likely continue so to be sold, as Tarpon Springs is too inaccessible for the "key" boats, but it is probable that in time most, if not all, of the sponges from the "bay grounds" will be marketed at Tarpon Springs. Over two-thirds of them were so disposed of in 1900. All of the data in the first table, except wages and buyings, have already been shown in the regular fishery tables.

Table showing the extent of the sponge-buying business in 1900.

Items.	Key West. ^a		Tarpon Springs.		Total.	
	No.	Value.	No.	Value.	No.	Value.
Buyers.....	11		6		17	
Employees.....	67		57		124	
Wages.....		\$25,978		\$17,969		\$43,947
Property.....		90,400		9,332		99,732
Total.....		116,378		27,301		143,679

Kinds.	Key West.		Tarpon Springs.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Sheepswool.....	95,490	\$229,433	85,821	\$253,830	181,311	\$483,263
Yellow.....	49,135	31,975	24,129	12,070	73,264	44,045
Grass.....	81,055	20,613	63,259	12,650	144,314	33,263
Glove.....	12,428	1,794			12,428	1,794
Velvet or boat.....	6,808	5,320			6,808	5,320
Total.....	244,916	289,135	173,209	278,550	418,125	567,685

^aIncludes one buyer at Lemon City.

Table showing, by places, kinds, and grounds, the extent of the sponge-buying trade in 1900.

Kinds and grounds.	Key West.		Tarpon Springs.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
From bay grounds:						
Sheepswool.....	37,196	\$102,215	85,821	\$253,830	123,017	\$356,045
Yellow.....	9,095	6,027	24,129	12,070	33,224	18,097
Grass.....	7,990	2,866	63,259	12,650	71,249	15,516
Glove.....	1,185	168			1,185	168
Velvet or boat.....	386	64			386	64
Total.....	55,852	111,340	173,209	278,550	229,061	389,890
From key grounds:						
Sheepswool.....	58,294	127,218			58,294	127,218
Yellow.....	40,040	25,948			40,040	25,948
Grass.....	73,065	17,747			73,065	17,747
Glove.....	11,243	1,626			11,243	1,626
Velvet or boat.....	6,422	5,256			6,422	5,256
Total.....	189,064	177,795			189,064	177,795
Grand total.....	244,916	289,135	173,209	278,550	418,125	567,685