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# OTHER FISHERY NOTES

## Additions to the Fleet of U.S. Fishing Vessels

A total of 143 vessels received their first documents as fishing craft during August 1947, compared with 134 in the same month the previous year. The State of Louisiana led with 20 vessels documented during the month, followed by Washington with 17 vessels, and North Carolina with 16 vessels, according to information received from the Bureau of the Customs, Treasury Department. Of the 924 vessels documented during the first eight months of 1947, Washington led with 188 vessels, 95 were from California, and 80 from Louisiana.

Vessels Obtaining Their First Documents as Fishing Craft						
Section	August		Eight mos. ending with August		Twelve Months	
	1947	1946	1947	1946	1946	
	Number	Number	Number	Number	Number	
New England	6	7	58	47	86	
Middle Atlantic	8	12	50	43	74	
Chesapeake Bay	8	9	68	45	71	
South Atlantic and Gulf	66	46	316	205	351	
Pacific Coast	32	43	318	293	375	
Great Lakes	13	10	59	57	76	
Alaska	4	1	25	17	19	
Hawaii	5	3	18	· '7	17	
Unknown	í	3	12	13	16	
Total	143	134	924	727	1,085	

Note: Vessels documented by the Bureau of the Customs are craft of 5 net tons and over.



# Krug Urges More Fish for Use on Two Meatless Days

Secretary of the Interior J.A. Krug announced on October 7 that he was urging the fishing industry to see that good supplies of fish and other seafoods are

available in markets throughout the country on Tuesdays and Thursdays as well as on the traditional Friday fish-day.

President Truman has asked the nation to forego meats on Tuesdays and poultry and eggs on Thursdays in order to conserve food supplies.

"The fishing industry has always made special efforts to see that good supplies of fish in many varieties have been available for Friday use," Secretary Krug said. "From now on we are expecting the industry to make an equal effort to see to it that plenty of fish and other seafoods are available on the new meatless and eggless days. The industry has always sought to persuade housewives to use fish on days other than Friday and will welcome its present opportunity."



He also said that the Fish and Wildlife Service would join the industry in encouraging more retail stores to install adequate equipment for the handling of fishery products.

"The fishing industry is one of the few important elements in the food field that is capable of rapidly expanding its production at the present time. Literally millions of pounds of nutritious fish will be made available by the industry as soon as needed."

The Secretary said that he also had instructed the Fish and Wildlife Service to begin a campaign to teach housewives how to use fish economically.

Suggestions offered by the Service are:

Where to buy: Select a reliable market or store with facilities for handling fish adequately. Fresh fish should be well iced in the displays and frozen fish should be solidly frozen.

What to buy: For economy, look for items in abundant supply or for local or lesser known varieties of fresh fish; compare fresh and frozen fish prices. Fillets and steaks are economical because they have little waste and generally involve little cleaning or other preparation to make them ready for the pan.

Modern methods of refrigeration make possible the preparation of frozen products with flavor equal to that of fresh fish. Foods frozen while in prime condition and kept properly refrigerated, retain their fine, full flavor after defrosting.

- How to select: The homemaker who buys fish only occasionally may have difficulty in accurately appraising quality and therefore must depend, to some extent, on the judgment of the retailer. Little trouble should be experienced in distinguishing between the various stages of freshness if the following factors are observed:
  - 1. Whole fish, as a rule, should be rigid and flesh should be firm.
  - 2. Odor should be mild and pleasant.
  - 3. Eyes should be clear and full.
  - 4. Gills should be reddish or pink in color.
  - 5. Skin should be shiny and the color unfaded.
  - 6. Frozen fish should be in a solidly frozen condition. There should be no trace of browning or dried-out appearance.
- How to prepare: Many retailers make a practice of providing tasty recipes for the preparation of fish. Ask for such information. Follow cooking directions closely. It is important that fish be given its proper cooking time. Do not overcook.
- <u>Cuts of fish</u>: Clerks are sometimes helpful in advising the better cuts for particular cookery, aiding in good selection, and suggesting good buys. Most retailers will prepare the fish in the form required for cooking. Buy your fish so there will be the least work for you in the kitchen. Fish may be obtained in the following forms:

Whole or round--fish as caught (Allow 1 pound per person)

Drawn--entrails only are removed (Allow 3/4 pound per person)

Dressed--entrails, head, tail, and fins are removed (Allow 1/2 pound per person) Pan-dressed--prepared as above, perhaps split, ready for the pan (Allow 1/2 pound per person)

Fillets--side of fish cut away from bone, practically boneless (Allow 1/3 pound per person)

Steaks--cross sections of large fish (Allow 1/3 pound per person)

Chunks--thicker portions than steaks (Allow 1/3 pound per person)

How to handle in the home: Fish is a perishable item. Wrap in moistureproof paper and place it in the refrigerator until time for preparation.

Do not allow fish, either fresh or frozen, to stand in water. If fish must be washed, do so quickly by dipping in cold water. Dry or drain immediately.

Frozen fish should be placed in the freezing unit of the refrigerator. To thaw, place it in the warmer section of the refrigerator or expose to room temperature. Frozen foods may be cooked without preliminary thawing if additional cooking time is allowed.



## Motion Picture on Retailing Fish

Improvement in fish retailing practices in the average store is the objective of a motion picture titled "Retailing Fish" being produced by the Fish and Wildlife Service under its program of market development. The subject was se-

lected because of its importance in the field of marketing fishery products. Better retailing practices will do much to provide for increased consumer acceptance of products of the fisheries.

An instructional movie, the film depicts the handling and merchandising of fresh and frozen fishery products. Such factors as methods of selecting, icing, and handling fish; cleanliness and sanitation; and display and merchandising receive particular emphasis. Representative scenes adaptable to the average retail outlet are to be shown.

The writing of the script and selection of location are



SHOOTING "RETAILING FISH"

under way. Present plans call for the shooting of major sequences of the film in a super market in Philadelphia. Others will be taken in a Brooklyn, N. Y., retail fish store, and in a White Plains, N. Y., frozen food market. Shooting is planned for completion by the end of October with editing of rushes and fitting of commentary to film to be finished sometime in December. Prints of the film are expected to be available for distribution sometime in February 1948. Although directed primarily at retail operations, this film will be of interest to consumers as well as members of the fishery industry because it shows in an interesting manner the operations in a well-run market. It also impresses the need for adequate care and handling of the product all along the line, from producer to retailer. Wholesale dealers and distributors may obtain from this picture a realization of the importance of efficient retailing in the chain of fish distribution.

The film is in 16 mm. sound and color and runs about 20 minutes. Arrangements for scheduling this film for private showing can be made by writing to U.S. Fish and Wildlife Service, Department of the Interior, Washington 25, D.C. Copies will be available for distribution sometime in February.



# Synthetic Vitamin A

U. S. SYNTHETIC VITAMIN A: Synthetic vitamin A has been prepared in pure crystalline form as the alcohol, and as the acetate and anthraquinone carboxylate esters, according to an abstract of a paper presented by Cawley, Robeson, Weisler, Shantz, Embree, and Baxter at the American Chemical Society meeting, New York City,



on September 15. The crystalline alcohol melted at  $61^{\circ}-62^{\circ}$  C., the same as a sample of material prepared from natural sources; and a mixed melting point showed no depression. The synthetic acetate melted at the same temperature as natural vitamin A acetate:  $57^{\circ}-58^{\circ}$  C. The anthraquinone carboxylate melted at  $121^{\circ}-122^{\circ}$  C., the same as the corresponding ester of the natural vitamin.

The crystalline synthetic alcohol had an extinction coefficient of 1800 at 325 mmu., compared with 1780 for the natural vitamin. The ultraviolet absorption curves are nearly superimposable. The synthetic acetate was also identical with the acetate of natural vitamin A.

The infrared spectra of the synthetic and natural vitamins were also closely similar. The blue colors formed by treatment of the two materials with antimony trichloride seem to be identical.

The biological assays of the crystalline synthetic material against crystalline natural vitamin A and its acetate showed it to be fully equal in potency.

It has been shown that the synthetic material contains neovitamin A in about the same ratio as has been found in fish liver oils.

It was reported that pilot plant work has been in progress and it is expected that experimental samples will be available shortly. The material will be made available commercially in oil solution, at high potencies, probably in the form of the acetate ester, and probably at a concentration of 1,000,000 U.S.P. units per gram.

The producing corporation, Distillation Products, Inc., Rochester, N. Y., has stated that it is a little early to make any statements that fish liver oils will be replaced completely, and that it will be some time before its production will be sufficient to supply even a part of the potential demand for vitamin A; however, it is moving in the direction of early production.

The corporation hopes to make synthetic vitamin A available at prices generally comparable to distilled vitamin A ester concentrates, but production problems and yield behavior will determine that important point.

DUTCH SYNTHETIC VITAMIN A: The successful synthesis of vitamin A was announced by the Organon Pharmaceutical Laboratories, Oss, Holland, according to "Aneta" news agency. The agency report said that a variety of tropical grass, abundant in Indonesia and Australia, serves as the raw material for the synthetic vitamin, but added that the company had warned against premature expectation of large supplies of it in the near future.



# National Resources and Foreign Aid

National Resources and Foreign Aid, a 97-page report by Secretary Krug of the Department of the Interior, contains in Part III, under "Commodity Summaries," the following resume of the situation with respect to fishery products:

> The production of fish and shellfish in 1947 is estimated at 4.4 billion pounds. Of this yield about 3 billion pounds will be used to produce commodities for human consumption (a portion of this amount is waste material). The remainder will be used for the manufacture of industrial products, principally fish oil and fish meal.

> Imports are estimated as amounting to 500 million pounds (round weight basis). Changes in inventories of fish will be negligible. Exports are estimated as amounting to 220 million pounds edible weight or about 440 million pounds round weight.

A foreign-aid program would not noticeably affect imports since imported fish are largely "specialties" which have a specific and continuing market. Similarly, such a program is not expected to affect exports. European fish production is practically back at prewar levels in the major fish-producing countries, and surpluses amounting to above 480 million pounds for 1947 are available in Norway, Denmark, Iceland, and the United Kingdom. Exports usually occur in canned fish products and are a relatively expensive source of calories. Moreover, a substantial increase in canned fish exports, suddenly effected during the coming year. would reduce the per capita consumption of fish in the United States at a time when domestic fish consumption should be increased if meat consumption is to be reduced to conserve grains for export. However, if the canning of less popular species, such as rockfish, silver, hake, Maine herring, or mullet is increased and the product exported, domestic consumption would not be greatly affected.

In order to provide fishery products for European nations requiring greater supplies of protein food, fish surpluses could be diverted from the northern European countries, and gear and processing equipment could be furnished to countries whose fishing industries were destroyed by the war. Germany, for example, produced about 1.6 billion pounds of fish annually before the war. Less than 40 percent of that production has been restored.

Domestically, fish waste and byproducts could be used in increased quantities for the purpose of animal and poultry feeding. Fish protein is substitutable in part for vegetable protein, and its increased use for animal and poultry feeding would reduce domestic consumption of grains needed for export.

Facilities exist for a substantial increase in the production of fish waste and byproducts. However, increased production is dependent upon the size of the runs of pilchards and menhaden. In recent years the runs of pilchards on the west coast have been much below average. Any return to favorable conditions would provide larger supplies of fish meal and fish oil for feed.

The United States is on a net import basis with respect to fish oils used for pharmaceutical purposes, and imports of these products could be increased.

TABLE 12.-United States exports, by continents EDIBLE AND NONEDIBLE FISHERY PRODUCTS

	1936-38	average	1947—first 6 months <sup>1</sup>		
Continent	Amount	Percent of total	Amount	Percent of total	
North America South America Europe Asia Oceania Africa	\$2, 219, 040 692, 371 8, 836, 049 1, 455, 446 320, 091 581, 614	4. 91 62. 65 10. 32	\$3, 781, 760 1, 422, 436 19, 095, 923 4, 518, 017 122, 792 479, 771	12.854.8364.9115.36.421.63	
Total	14, 104, 611	100. 00	29, 420, 699	100.00	

<sup>1</sup> Excludes a relatively small amount of inedible fish products.

Norz.-Source: Foreign Commerce and Navigation of the United States, U. S Department of Commerce, Bureau of Foreign and Domestic Commerce (1936-33 Yearbooks) and 1947 preliminary publications.

The report may be obtained for 60 cents from the Superintendent of Documents. U. S. Government Printing Office, Washington 25, D. C.



Catch in TVA Lakes Increases

The commercial fish catch in TVA lakes was higher for fiscal year 1947 which ended June 30, than for the previous year, according to figures released by TVA in the September-October 1947 issue of the Tennessee Conservationist.

The Chief of TVA's Fish and Game Division reports that the 1947 catch of nongame fish was 1,550,000 pounds as compared with 1,183,500 pounds for the year before.

#### TABLE 13.-United States production, exports, and imports

#### FISH PRODUCTS

#### [In thousands of dollars]

Year	Production	Exports	Imports	
1919	(1)	(2)	(2)	
1920			(2)	
1921		(2)	(2)	
1922		(2) (2) (2) (2)	(2) (2) (2)	
1923		(2)	(2)	
1924		20, 850	46, 399	
1925		21, 263	49,031	
1926		20, 329	50, 095	
1927		18, 717	55, 634	
1928	116, 384	20, 329 18, 717 21, 174	58, 855	
1929	123, 054	23, 830	60, 566	
1930	109, 349	17, 276	50, 830	
1931	77, 344	11, 574	43, 033	
1932		7,808	29, 566	
1933	60, 218	8, 339	30, 462	
1934		13, 822	30, 790	
1935		14, 374	30, 790 36, 232	
1936		13, 331	41, 873	
1937		14, 567	50, 636	
1938	93, 547	14, 415	39, 307	
1939		14, 207	45, 999	
1940	- 98,957	17, 785	41, 830	
1941	134, 172	22,008	40, 981	
1942	170, 338	31, 989	39, 629	
1943		45, 830	67, 231	
1944	_ 207, 300	33, 209	39, 629 67, 231 * 68, 761	
1945	_ 230, 941	34, 183	· 87, 785	
1946	253,000	40, 887	<sup>8</sup> 103, 744	
1947 4	5 260, 130	(6)	(0)	
1948 4	<sup>5</sup> 265, 147	(6) (6) (6)	(6)	
1949 4		(6)	(6)	
1950 4	5 275, 430	(6)	(6)	
1951 4	- <sup>5</sup> 280, 703	(6)	(0)	
1952 4	<sup>5</sup> 286, 068	(6)	(0)	

Not available.
 Available in Foreign Commerce and Navigation, U. S. Department of Commerce.
 Excepts a relatively minor amount of miscellaneous fishery products.
 Estimates.

Estimated on basis of 1946 average price for fish and shellfish.
No estimates of these items were given.

NOTE.—Source: Fish and Wildlife Service, Department of the Interior. Production—export and import series for fish are not available on a uniform weight basis Data given are on value basis. Produc"Fishermen's incomes for the two seasons were \$299,667 and \$207,300, respectively. These are not estimates, but actual purchases reported by commercial fish buyers. The total catch, including fish used by the fishermen or sold direct to

consumer, is much greater. Including the mussel crop, which last year was valued at close to \$500,000, the total annual commercial harvest from TVA waters is estimated at \$1,000,000.

"The 1947 catch included 808,165 pounds of catfish, 209,150 pounds of buffalo,148,190 pounds of carp, 217,180 pounds of spoonbill, and 86,315 pounds of drum and sturgeon. More than a million



PICKWICK LANDING DAM - TVA

pounds came from Alabama lakes alone. Based on pre-impoundment studies, this is at least a sixfold increase over the poundage taken from the Alabama section of the Tennessee River before the dams were built. Practically all fish taken in TVA waters are utilized locally, except spoonbill, which is shipped to New York markets.

"Commercial fishermen use different types of gear for different species. Carp and buffalo are taken mainly in nets. Most of the catfish and spoonbill are caught on snag lines. Baited set lines are also used. Snag lines differ from set lines in that more hooks are used and they are not baited; fish are hooked in the body, not in the mouth.

"Predictions that construction of dams on the Tennessee River would ruin mussel beds and deprive pearl button manufacturers of one of their best sources of shells have proved unfounded. The total mussel-shell harvest for 1946 was 9,200 tons valued at \$500,000. This is roughly three times the 1945 tonnage and only 200 tons short of the all-time high production of 1942. Ninety percent of the 1946 production came from Kentucky Reservoir. Since extensive shell beds were discovered last year in Pickwick, Wheeler, and Guntersville reservoirs, production from the Alabama section of the river will no doubt increase in the future. Since more musselmen are now operating on the river, the 1947 tonnage is expected to exceed that for 1946."



# Will Develop Hawaiian Fishing Industry

Secretary of the Interior J. A. Krug announced on September 23 that two experts of the Fish and Wildlife Service will begin preliminary discussions in Hawaii early next monthon a program for the development of the high seas fishing industry in the South Pacific. Officials of the Territorial Government will participate in the discussions.

The program, authorized by the last Congress, is expected to stimulate the development of the Hawaiian commercial fishing which, in the view of officials, has great potentialities.

Milton C. James, Assistant Director of the Fish and Wildlife Service, and Dr. H. J. Deason, Chief of the Office of Foreign Activities, will represent the Department at the Hawaii conference.

#### COMMERCIAL FISHERIES REVIEW

Prior to the war, Japanese nationals controlled the offshore fishing industry in Hawaii and other Pacific islands. Because of this, the Federal Government must start practically from scratch to develop the offshore industry for the benefit of the residents of the Islands. The Act, which was sponsored by Delegate Joseph R. Farrington of Hawaii, authorizing the Department of the Interior to undertake the Hawaiian program, directs the Fish and Wildlife Service in cooperation with Territorial and Island officials to conduct explorations, technological, and economic studies to insure the maximum development and utilization of the fish resources of the Islands.

No appropriation was provided for in the Act and budget requests will be submitted at the next session of Congress.

The legislation provides for the construction of a fishery research laboratory and experiment station in the Hawaiian Islands and for the necessary substations, together with dock and storehouse facilities to be used in conjunction with the operation of research and experimental fishing vessels. It also provides for the procurement of three surplus vessels, a multiple purpose high seas fishing and oceanographical research vessel, and two experimental high seas fishing vessels, and for their conversion and equipment.

From Honolulu, Mr. James and Dr. Deason will proceed to Manila to inspect the progress made by the Fish and Wildlife Service experts who were assigned to the Philippine Fishery Rehabilitation Program early this year. 1/



# Committee of European Economic Cooperation

The results of the work of the Committee of European Economic Co-operation have been published by the State Department in two volumes. The first volume, General Report, is Publication 2930, European Series 28.

The second volume, entitled <u>Technical Reports</u>, is Publication 2952, European Series 29. It contains considerable information on European fishery production, import requirements, and exportable surpluses. Copies of these reports may be obtained from Division of Publications, Office of Public Affairs, the Department of State, Washington 25, D. C.



# Japanese Economy

An idea of the important part that food plays in shaping civilization may be gleaned from the following excerpts taken from <u>Weekly Summary of the Natural</u> <u>Resources Section</u>, No. 96, of the Supreme Commander for the Allied Powers in Japan.

So important has been the need for food, particularly fish, on the part of Japan that Supreme Headquarters is giving it No. 1 priority in its effort to make Japan economically self-sustaining.

The Problem: War or Democracy? Beginning in 1875, Japan continuously expanded her activities in the search of raw materials. Six wars in 50 years netted 1/See "TWS Vessels Depart for Philippines," <u>Commercial Fisheries Review</u>, July 1947, pp.34-5. October 1947

marked increases of supplies. Each time, the nation obtained more food and raw materials for its crowded population. Formosa in 1895 meant sugar, camphor, petro-

leum, rice, and fish. Karafuto in 1905 meant wood pulp, fish, petroleum, and coal. Korea in 1910 meant rice, fish, cotton, and minerals. Manchuria in 1932 meant, beans, coal, steel, and chemicals. These facts tell us that Japan maygo to war again unless we can make her self-sustaining and democratically inclined. If the people of future Japan continue to sufferfrom hunger and cold and continue to lack clothing and decent housing facilities, democratic institutions will be a mockery.

Solution of the Problem: An important part of our effort is directed toward mak-



- (1) Maximizing the immediate production of food and raw materials;
- (2) Promoting more effective use of materials;
- (3) Insuring maximum long-range production of natural resources.

Japanese fishery production within the authorized area has now been brought to a level equal to, or greater than, prewar production in the same waters. Efforts are being made to increase production still further. However, the maintenance of the fishery at even the present level will be at the expense of future production. We are therefore commencing studies of fish population and fishing effort in critical areas. In this way we hope ultimately to determine the type of management needed for maximum long-term production.



### State Department Increases Fishery Staff

The Department of State announced on September 18 the appointment of Robert W. Tyson, formerly of the Department of Agriculture, to the Fisheries and Wildlife Branch, International Resources Division. Mr. Tyson is being added to the staff of the Fisheries Branch primarily to carry out the instructions of the Congress in its appropriation of \$25,000 to initiate an international fishery conservation program for the Northwest Atlantic Ocean.



### Army Fish Purchases

Purchases of fish, exclusive of canned fish, by the Army Quartermaster Corps' 12 market centers from January to August, inclusive, have been as follows:

 February - 1,046,459
 April 968,765
 June 993,738

 March
 - 1,802,210
 May
 - 1,280,673
 July 787,763
 August 1,162,716



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These purchases are in line with the expectations that the Quartermaster Corps had earlier in the year, that their purchases would average about a million pounds per month.



# Purchases of Fish by Department of Agriculture

Purchases of fishery products by the U. S. Department of Agriculture during August amounted to 117,957 cases with a value of \$361,466. The purchases followed the pattern of August 1946, in that they were confined mostly to the less expensive varieties of fishery products.

	Purchases	of Fishery Pro	ducts by USDA	The state of the	and entering the time	
Conneditor	Unit	Augus	t 1947	July-August 1947		
Commodity	OHIT	Quantity	F.O.B. Cost	Quantity	F.O.B. Cost	
FISH			Dollars	Carl Charles and	Dollars	
Hake, canned	Cases	20,838	62,514	20,838	62,514	
Herring, "	н	60,321	165,644	60,321	165,644	
Mackerel, "	н	36,798	143,309	36,798	143,309	
Total		117,957	361,467	117,957	361,467	



# Wholesale and Retail Prices

Prices of foods rose 3.3 percent and agricultural products, 2.0 percent from June to July, reaching levels only slightly below their March peaks and  $l\frac{1}{2}$  to 2 times more than August 1939, according to the Bureau of Labor Statistics, U. S. Department of Labor.

The family food bill in 56 cities advanced 1.4 percent between mid-June and mid-July, according to the same source. Higher prices for eggs, dairy products,

Wholesale and Retail Prices					
Item	Unit		Percentage change from		
Wholesale: (1926 = 100) All commodities Foods	Index No. do	July 12,1947 148.3 165.8	June 14,1947 +0.5 +2.1	July 13,1946 +22.9	
Fish: Canned salmon, Seattle:		July 1947	June 1947	July 1946	
	\$ per doz. cans do	3.817 5.656	+24.0 + 3.0	+76.0 +39.0	
Gloucester, Mass. Herring, pickled, N. Y. Salmon, Alaska, smoked, N. Y.	\$ per 100 pounds ¢ per pound do		0 0 0	0 0 0	
$\frac{\text{Retail:}}{\text{All foods}} (1935-39 = 100)$	Index No.	July 15,1947 193.1	June 15,1947 +1.4	July 15,1946 +16.5	
Fresh and canned Fresh and frozen Canned salmon:	do ¢ per pound	260.6 38.1	+2.3 +2.8	+10.8 - 3.9	
Pink Red 1/Discontinued pricing July 1947	¢ per pound can do	41.6 1/	+1.2	+63.8	

and meats were the chief factors in the rise over the month. Between March and July, the rise in food prices averaged 1.9 percent, which is approximately equal to the usual seasonal increase over this 4-month period.

The index for fresh and canned fish, during the month, showed an increase of 2.3 percent.

The retail pricing of canned red salmon was discontinued during July.



### CHINCOTEAGUE - A NATIONAL WILDLIFE REFUGE

The famous shellfish country of the eastern shore of the Chesapeake surrounds the Chincoteague Wildlife Refuge. Chincoteague oysters have a

widespread reputation for quality; perhaps the fact that they grow in water that is almost as salty as the open ocean accounts for their distinctive flavor. Although the region is best known for its oysters, clamming, carried on throughout the year, probably brings a larger income to local fishermen than the oysters do.

The establishment of a wildlife refuge has not interfered with the use of the area for shellfishing. The refuge itself contains about 250 acres of shell-

fish grounds. These consist of a narrow strip of flats between the tide lines, running in a long arc around the inside of Assateague Anchorage, and bordering the channel between the islands.

About 184 acres of these grounds are under cultivation. Before the refuge was established, the shellfish area was leased from the former owner of the property. It is now leased from the United States Government. One-fourth of the rental is paid to Accomac County, in which the refuge lies. The balance goes into the United States treasury.

--Conservation in Action, No. 1

