December 1950

REFRIGERATION: A comprehensive examination was made of all samples of rockfish fillets stored at 0° F. in connection with the project to determine the palatability and cold storage life of various species of rockfish. Samples had been in cold storage for approximately four months, with the exception of Sebastodes miniatus (vermilion rockfish) which had been in cold storage for approximately two months. The samples had been prepared and frozen under supervision of personnel of the Seattle Fishery Technological Laboratory in commercial fillet plants, using regular commercial procedures. The frozen fillets were thawed and the following observations were made:

Examination of thawed raw fillets:

1. Sebastes marinus (Atlantic rosefish or ocean perch): Samples showed no noticeable change in appearance; some fillets had a slight sweetish odor.

2. Sebastodes alutus (long-jawed rockfish): Only a few of the fillets showed a slight over-all discoloration; most fillets showed a slight discoloration around the edges. Most fillets had a sweetish odor, while a few had a pungent odor.

3. S. diploproa (lobe-jawed rockfish): Fillets were somewhat darker in color than S. marinus; the edges of the fillets were discolored. Odor varied from a sweet to a strong pungent smell; the dark flesh had a moderate rancid odor.

4. S. pinniger (orange rockfish): Fillets were a light yellowish-brown and especially discolored along the edges; some fillets had brown lines running the length of the fillet. All were rancid in odor.

5. S. goodei (?) ("chili pepper"): Fillets showed moderate darkening over-all; several fillets had brown streaks running the length of the fillets; there was moderate discoloration along edges of some fillets. All had a slightly sweet odor.

6. "Idiot" (Scientific name unknown): Color of fillets was normal except for a light brown line running the length of a few fillets. Odor was moderately sweet.

7. S. ruberrimus (red rockfish): Fillets showed great variation in appearance; those which were thick, were discolored around

the dark flesh and were from slightly discolored to moderately discolored on the other surfaces; a cross-section cut showed the inner flesh to be of very good color. The thinner fillets with a large portion of dark flesh (probably cut from the tail section) were in very poor condition. The odor was rancid and especially strong near the dark flesh.

8. S. miniatus (vermilion rockfish): All of the fillets were markedly discolored and strongly rancid in odor; about half of the fillets were of average thickness, had a large portion of dark flesh, and were in a very poor condition. Even the thicker fillets were moderately discolored throughout a cross-section cut.

9. S. paucispinis (bocaccio): Fillets were grayish-white in color; several fillets had dark-brown spots and light-brown streaks. There were no off odors.

Results of Taste-Test Panel on Cooked Fillets: The samples were divided into two groups for examination by the taste-test panel. The rockfish are listed in general order of acceptability within each respective group.

Group I:

1. Sebastes marinus and Sebastodes alutus: There was no significant change in palatability but more people gave preference to S. marinus than to the S. alutus.

2. S. paucispinis and "idiot": The appearance of both was good; S. paucispinis was somewhat tough in texture; "idiot" was soft in texture and its flavor rating was quite variable.

3. "Chili-pepper" and S. diploproa: Both had a slight over-all discoloration; "chili-pepper" was slightly tough in texture; the flavor of both was rated below that of S. alutus.

Group II:

1. S. alutus, followed by S. paucispinis.

2. S. ruberrimus: The outer surface of the fillets was discolored and tasted rancid but the inner portion of the thicker fillets was white in color and generally good in flavor.

3. S. pinniger: Fillets were discolored over-all and slightly rancid in taste.

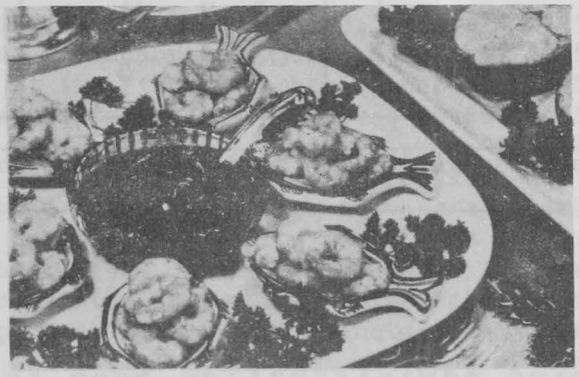
4. S. miniatus: Several of the fillets were discarded as unfit. The fillets tested had an over-all discoloration; the texture and flavor were comparable to those of S. ruberrimus.

The only outstanding changes to date resulting from holding in cold storage the various species of rockfish fillets took place in the samples of S. ruberrimus, S. miniatus, and S. pinniger. These samples were of poor appearance, odor, and flavor; they had become discolored and were difinitely rancid in odor. (Seattle)

CANNING: Further examinations were made on the canned pink salmon packs prepared during 1949-50 in connection with the project to study methods of handling frozen salmon to be used for canning. Considerable variation was noted in the free-oil content of the control samples prepared from the fresh fish. Judging from the samples examined to date, the decrease in free oil of canned pink salmon prepared from frozen fish was not as important a factor as was found with sockeye salmon. Additional samples will be compared in order to confirm this.

The most serious quality change found in the pink salmon canned from frozen fish stored at 0° F. has been the development of strong off flavors in the fatty portion of the fish. The development of a dry, firm texture and the occurrence of excessive curd was evident in many samples; however, the taste panel rated the firmer texture superior in many cases to that of the control samples. This might lead some to believe that the texture of a soft fish, such as pink salmon, could be actually improved by freezing and storing 6 to 8 weeks before canning. With the pink salmon stored for longer periods, there is no question but that the dry, hard texture of the canned product was definitely objectionable. As was the case with sockeye salmon, excessive curd was present in many cans of the pink salmon prepared from frozen fish; however, the lighter color of the pink salmon made the curd less noticeable than in the sockeye pack. In samples prepared from fish frozen and stored for 16 weeks and longer, the curd tended to discolor in the can and to have an objectionable appearance. (Ketchikan)

SHRIMP COCKTAIL



Boiled Shrimp

1½ pounds green shrimp
1 quart water
4 tablespoons salt
1 lemon

Wash green shrimp and place in rapidly boiling, salted water. Cover and bring to boil, simmer 5 minutes. Drain, peel, and remove sand vein. Chill. Place shrimp in lettuce cup in cocktail glass and place 1 tablespoon of cocktail sauce in center. Garnish with lemon wedges. Serves 6.

Cocktail Sauce

3/4 cup tomato catsup
1/4 cup lemon juice
3 tablespoons minced celery
1/3 teaspoon salt
6 drops tabasco sauce
Dash cayenne

Combine all ingredients and chill. Serve on any seafood cocktail.

Fish and Wildlife Service tested recipes. These are two of a series of recipes using fishery products tested and developed in the Service's test kitchens.