

CLASSIFIED ADVERTISING.

HELP WANTED.

WANTED—A COMPETENT GIRL for general housework. Call phone Main 2311. 7-12-11.

WANTED TO RENT—HOUSE OF 5 OR 6 rooms, with bath. Leave word at Royal Bakery. 7-14-11.

WANTED—A GIRL TO CLERK IN store. Apply 505 Commercial street. 7-13-11.

GOOD PAY—MEN WANTED EVERYWHERE to tack signs, distribute circulars, samples, etc.; no canvassing. National Dist. Bureau, Chicago, Ill. 7-14-11.

WANTED—AN APPRENTICE TO learn dressmaking. Apply Hawks & Smith, 519 Duane street. 7-13-11.

MALE HELP WANTED—MEN AND women to learn watchmaking, engraving, jeweler work, optics; easy terms; positions guaranteed; money made learning. Watchmaking-Engraving School, 1428 Fourth avenue, Seattle.

WANTED—SALESMEN. MANY MAKE \$100 to \$150 per month. Some even more. Stock clean; grown on Reservation, far from old orchards. Cash advanced weekly. Choice of territory. Address Washington Nursery Company, Toppenish, Washington. 9-25-11.

REAL ESTATE WANTED.

WANTED TO BUY—HOUSE AND LOT in Astoria. Address "H. I." care Astorian office. Give full particulars.

WANTED TO RENT OR BUY—SMALL cottage, 4 or 5 rooms. Western Realty Co., 495 Commercial street.

Timber Wanted.

Timber wanted in large or small tracts; also good going operations; give full particulars. Charles M. Lanning & Co., La Fayette Bldg., Portland, Ore.

FOR SALE—REAL ESTATE.

PROPERTIES FOR SALE BY

O. F. MORTON

One house and lot on Commercial street, \$8000.

Two lots on Irving avenue, \$3000.

Two lots on Grand avenue, \$5000.

One lot, Duane street, \$8000.

One lot and one house and lot, Franklin avenue, \$2250.

1000 feet of frontage on Young's Bay, fronting two 5-acre tracts.

900 feet frontage on Young's Bay, entrance Warrenton side, \$20,000. 3 1/2 acres H. & A.

18 acres on Pipe Lines, \$1600.

One double house, lots 150x150; Adair's, \$2250.

One house and lot, Adair's, \$1500.

Four lots and house, Alderbrook, \$1850.

Two houses and four lots, \$5000.

One house and lot; lot 75x150; easy terms; \$850.

THE A. & C. R. R. SOUVENIR CLAM SUGGESTS To any buyer in search of earth. In order to get it for price it's worth, call at 430 Commercial street, where I am. All you have to do is open your clam.

I have cottages by the sea. As the souvenir says come to me, already furnished, ready to sleep or eat, location is sweet; price can't be beat.

O. F. MORTON, 430 Commercial St. Astoria, Ore.

FARM FOR SALE, \$2250—160 ACRES; six acres cleared; good house and barn. Western Realty Co.

BIG BARGAIN, \$5000—160 ACRES; 85 acres cleared; 6-room house; good barn; stock and farm implements; on Lewis & Clark. Western Realty Co.

FOR SALE—STORE 22x40, AND LOT 25x125; Warrenton; price, \$1600. Western Realty Co., 495 Commercial St.

LAUNDRIES.

BUTTON HOLE AT THE BACK. Your experience with it has no doubt lead to much vexation, possibly profanity. Broke your fingernail trying to pry it up from the neck-band, and you won't have that that experience if you send your shirts to us; we save you this trouble, and danger of tearing the shirt. Try us and see.

TROY LAUNDRY, Tenth and Duane Sts. Phone 1907

BUSINESS DIRECTORY

RESTAURANTS.

Tokio Restaurant

531 Bond Street

Opposite Ross, Higgins & Co

First-Class Meals.

Coffee with Pie or Cake 10c

Regular Meals 15c, up

First Class Meal 15c

Coffee with Pie, Cake or Doughnuts 10 cents.

U. S. RESTAURANT

434 Bond Street.

Telephone 1681 Main. 399 Bond Street. OPEN DAY AND NIGHT

THE ASTORIA RESTAURANT

MANG HING, Prop.

The Finest 25c meal served in Astoria. Your Patronage Solicited.

Courteous Treatment to All. GAME IN SEASON

ASTORIA, OREGON.

HOTELS.

HOTEL PORTLAND

Finest Hotel in the Northwest. PORTLAND, ORE.

HOUSE MOVERS.

FREDRECKSON BROS.—We make a specialty of house moving, carpenters, contractors, general jobbing; prompt attention to all orders. Corner Tenth and Duane.

DRUGGIST

Columbia Drug Co.

Dr. Charles C. C. Rosenberg

(Successors to Dr. Linton's Drug Co.)

Dr. Rosenberg will give consultations and examinations free.

125 Eleventh Street.

Telephone Main 1171. Astoria, Ore.

MEDICAL.

Unprecedented Success of

DR. C. GEE WO

THE GREAT CHINESE DOCTOR

Who is known throughout the United States on account of his wonderful cures

No poisons nor drugs used. He guarantees to cure catarh, asthma, lung and throat trouble, rheumatism, nervousness, stomach, liver, and kidney, female complaints and all chronic diseases.

SUCCESSFUL HOME TREATMENT

If you cannot call write for symptom blank and circular, including 4 cents in stamps.

THE C. GEE WO MEDICINE CO. 162 1/2 First St. Corner Morrison, PORTLAND, OREGON.

Please mention the Astorian

UNDERTAKERS.

J. A. GILBAUGH & CO., Undertakers and Embalmers.

Experienced Lady Assistant When Desired.

Poston Bldg. 12th and Duane Sts. ASTORIA, OREGON

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PROFESSIONAL CARDS.

OSTEOPATHISTS.

DR. RHODA C. HICKS

OSTROPATH

Office Mansel Bld. Phone Black 3041 873 Commercial St. Astoria, Ore.

ATTORNEYS AT LAW.

JOHN C. McCUE,

ATTORNEY-AT-LAW.

DEPUTY DISTRICT ATTORNEY

Page Bdg. Room 37.

HOWARD M. BROWNELL,

Attorney-at-Law.

Office with Mr. J. A. Eakin, at No. 422 Commercial St., Astoria.

DENTISTS.

DR. VAUGHAN,

DENTIST

Pythian Building, Astoria, Oregon.

Dr. W. C. LOGAN

DENTIST

Commercial St. Shanahan Build

WINE, LIQUORS AND CIGARS.

Eagle Concert Hall

[320 Astor St.]

The leading amusement house.

Agency for Edison Phonographs and Gold Moulded Records.

P. A. PETERSON, Prop.

AMUSEMENTS.

PLEASANT HOUR

—OF—

ENTERTAINMENT

VAUDEVILLE AT THE LOUVRE

And Vaudeville that really Amuses and Interests you. Weekly Changes of Program and Each Change an Improvement

SPECIALTIES THIS WEEK

CUBA DE SCHON

The Stellar Artist

ELAINE FOREST

High Soprano and Illustrated Song Singer.

MARIE WANDRUTH

Flute Solist. Mistress of all Lady Melodists

FLORINE

Soprano Vocalist

ADMISSION FREE

LINDBECK & WIRKALA Props.

JAPANESE GOODS.

INEXPENSIVE

JAPANESE FIXINGS, MADE OF BAM BOO, LIGHT, STRONG, HAND MADE, TABLES, STANDS, CHAIRS

WHAT-NOTS, CROCKCASES, SHELVING, ETC.

Yokohama Bazaar

625 Commercial St. Astoria.

JNO. A. MONTGOMERY

PLUMBER

Heating Contractor, Tinner

—AND—

Sheet Iron Worker

ALL WORK GUARANTEED

425 Bond Street

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LOBSTER FARMING

FUTURE INDUSTRY

Its Possibilities Shown By The Work Of College Boys—Rearing Baby Crustaceans To Become Food For Epicures—Raising Of Little Lobsters.

PROVIDENCE, July 6.—To live amongst lobsters from June to October seems an odd part of a college boy's education. Everybody, nearly, has awakened to the fact that the higher training of today embraces something besides Latin, Greek and mathematics, even if those studies are still a proper part of a liberal education. The story of Louis Agassiz's giving a student who came to him to learn zoology a lot of clam shells with instructions to take them away and study them is familiar to almost everyone. But for a group of husky young fellows to spend their whole summer in a sleeping fishing village incessantly feeling and observing schools of tiny lobsters, recording almost limitless statistical data in note books and drawing pictures of the diminutive beasts in their various stages of development—why, that's enough certainly to excite the laughter of weather-hardened old fishermen who have supplied the United States with sea food these many years, dredging the oysters of Narragansett Bay or following the sea from Nantucket to Barnegat.

Or rather, it would excite their laughter, except that the work of the college boys already bids fair to make it easier for the fishermen to get his living from the sea. Young lobsters, it is said, have not for many years been seen in



FEEDING THE BABY LOBSTERS Every Three Hours the Brood of Twenty Thousand Newly Hatched Crustaceans Receive Their Allowance of Chopped Clam Meat

plied to the problem of preventing the extinction of our valuable shell fish is on the increase. The work of the Commissioners of Inland Fisheries of the State of Rhode Island, as conducted by teachers and students of Brown University, has given hope that our descendants may also have lobsters. For the first time anywhere the problem of artificially raising these crustaceans, treasured by such numbers as since the students began planting them, partly grown, along the shores. Soon the catch of sizable fellows will be increased, unless all signs fail. Consequently respect for the University's "book learning," as apt the chief and patrons of every American hotel and restaurant, has been successfully solved at the Wickford experiment station. Of one thousand little lobsters hatched under natural conditions from the egg clusters borne by the female parent, only one is estimated ever reaches maturity. The rest, for the most part during the first few days of their lives, are devoured by other lobsters or by greedy fishes, or perish through other causes. In the hatching bags of the experiment station, on the other hand, as many as 480 out of one thousand have been brought, at a very small expense per thousand lobsters, up to a size at which they can be let loose with good chances that many of them will attain the inches prescribed by law for the fishermen.

Even more remarkable results than this, it is the opinion of experts, may yet be shown by individuals who are willing to lock up capital in a crop that matures very slowly, but which, if successful, would yield large returns. The lobster farm is a possibility of the near future—a marine plantation among the wave washed rocks where the popular shell fish will be continually under the supervision of the owner from the summer days in which they are hatched as feeble, floating wigglers until five or six years later they are big enough for "Newbury" or "broiled alive." There are those who foresee a long line of lobster holdings on the Atlantic coast from Labrador to the Delaware Breakwater. New England cannot vie with the fertile West in raising corn and wheat, but neither can the West compete with the seaboard in producing lobsters.

Experts, at all events from abroad, where the danger of losing the lobster

altogether is also imminent, have visited the Rhode Island experimental station and have been impressed with its work. The United States hatchery at Boothbay Harbor in Maine, which has heretofore simply attended to hatching the eggs and letting loose the young lobsters in the first stage of their growth is reported to be about to adopt the plan of rearing that has been found successful at Wickford. To set a cloud of the larvae free in the ocean has been found to be mainly an excellent means of feeding other fish.

While, therefore, the young biologists of the university at Providence have been pursuing during the vacation months college studies that count as part of their regular work they have also been assisting in a very important industrial undertaking. For the past six or seven years under the direction of Professor A. D. Mead of the department of biology at Brown, who has also for some years been in the service of the Rhode Island Commission of Inland Fisheries, a number of students who have attained some proficiency in the natural sciences have each year served with the assistant director in charge of the work, Ernest W. Barnes. With ordinary expenses paid by the State in exchange for their services, with the opportunities of an outdoor summer in a quiet picturesque village on Narragansett Bay, with a cottage camp on a breezy point of land, a boating experiment station on which the bathing suit is the most appropriate warm weather costume, and with the enjoyment of having a recognized part in an undertaking for the benefit of future generations, it is no wonder that the privilege of taking such a course in marine biology is highly prized among Brown students. If they could be accommodated at the station, several times the half dozen young men who are chosen would elect so popular a study.

Not all the students spend their summer in study of the problems of the lobster alone. The clam, the crab and some of the food fishes have also received attention. Yet because of the special facilities offered at the station most of the investigations have concerned the big-clawed crustacean of the banquet table. Many of the researches have been important enough for the commissioners to publish in their annual reports or in special pamphlets. Thus one student has looked into the rate of growth of lobsters and discovered many curious and entertaining facts, chief among which is the lack of uniformity. One lobster at four years being three or four times as large as another lobster of the same age. Another young man has gathered and published many

data regarding the changes in form and color in the successive stages of the creature's growth. One has studied the subject of the regeneration of lost parts—it being an important fact that the lobster when one of his claws or antennae is caught can let it go, secure in the certainty that another will quickly replace it.

These and many similar investigations have been carried on aboard a queer-looking collection of rafts and boats that is anchored to a two-ton stone in a sheltered cove of Narragansett Bay about 20 miles below Providence. Two house-boat cabins in the centre of the plants contain respectively a little scientific laboratory and two gasoline engines of three horsepower. The latter are an absolute necessity for awfully raising the broods. Round about in every direction are boats and boxes containing old and young lobsters.

The process of rearing consists essentially in getting a lot of the little

fellows—twenty thousand is the ordinary number—into a great square canvas bag or wooden tub in which the water is kept constantly in a circular whirl by a revolving paddle. Food—finely chopped clams, usually—is dropped into the swirl every three or four hours, night and day. The newborn lobsters are greedy little beggars, and they will eat each other up if they are not kept moving and at the same time furnished plentifully with other food. Even in the best regulated breeding bag more or less cannibalism occurs, but not enough of it to prevent a goodly proportion of the lobsters surviving to the age proper for liberation.

The supply of larvae comes, of course, from full grown egg lobsters, taken by fishermen from the waters of the bay. All winter long the female crustacean bears, exposed on the under part of her body, great clusters of eggs—from 3,000 to 100,000 in number, according to her size. In June and July these hatch out. Throughout the spring months the experiment station at Wickford offers a premium for good sized lobsters "in berry," as the technical term is. The offerings are usually sufficient for the purpose in hand.

Experts can tell by the look of the lobster's eggs when they are ready to hatch. Into one of the rectangular canvas bags, with the water still, are plunged a score or more of the females whose broods are just about to break through the shells of the eggs. Soon the water is alive with a cloud of tiny larvae, mostly all stomach and eyes and antennae. As soon as the number is estimated to be about 20,000 the mother lobsters are removed and the great paddle, set somewhat like the fan that shoots flies in a restaurant, and actuated by the engines on the house boat, begins to rotate. From then on until they have reached what the naturalists call "the fourth stage" the youthful lobsters are literally in the swim. Day and night the paddle keeps the water stirring, enough coming through the sides of the bag so that it is always fresh and pure.

Each stage of the lobster's early development has its technical peculiarities. The mall point is that the little creatures molt frequently until, anywhere from ten to sixteen days after birth, they have passed the period in which they swim helplessly about in the water seeking whom to devour or by whom to be devoured, and have reached the age in which they begin to hide from their foes by burrowing under rocks or roots. Arrived at the fourth stage they are so far able to take care of themselves that it is the custom of the Wickford station to release them then, though as a demonstration they have on several occasions been carried several stages further. In order to add to the effectiveness of the system the young lobsters, when introduced from artificial to natural conditions are not simply dumped overboard, thus to attract a school of voracious fish. They are taken by the assistant scientists from the university and are deposited, a few at a time, among the roots of sedge grass or along a pebbly beach.

The mothers, too, are allowed to go after the eggs are all hatched, but not without taking a souvenir from the station. To the back of each is attached a copper tag bearing a number and the words "Return to Rhode Island Fish Commission." Such a practice has not arisen from boyish prank-playing. Many of the tags are returned by fishermen and data are thus gathered as to the distances which full-grown lobsters

remove, the time that elapses between the end of the egg hatching and the next casting of the shell, and similar objects of quest.

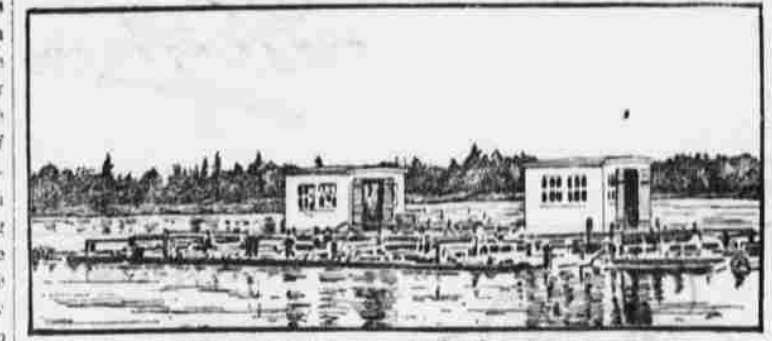
Removal Notice.

Dr. Nellie Vernon has moved her offices from the corner of Commercial and Eleventh streets, to the second floor of the new Astoria Savings Bank building, at Duane and Eleventh streets, where she will be found from this time forward. 6-30-2w.

Take the Postmaster's Word For It.

Mr. F. M. Hamilton, postmaster at Cherryvale, Ind., keeps also a stock of general merchandise and patent medicines. He says: "Chamberlain's Colic, Cholera and Diarrhoea Remedy is standard here in its line. It never fails to give satisfaction and we could hardly afford to be without it." For sale by Frank Hart and leading druggists.

57 Morning Astorian, 60 cents per month, delivered by carrier.



THE COLLEGE BOYS' SUMMER LABORATORY The House Boat in Narragansett Bay, S founded by the Canvas Nurseries in Which the Problem of Saving the Lobster is Being Solved