Prof. Huxley on the Herring Industry

Nature seems to offer us a hint as to the way in which a fish like the shad, which is so closely allied to the herring, has acquired the habit of ascending rivers to deposit its eggs in purely fresh water.

If a full female herring is gently squeezed over a vessel of sea-water, the eggs will rapidly pour out and sink to the bottow, to which they immediately adhere with so much tenacity that, in half an hour the vessel may be inverted without their dropping out. When spawning takes place naturally the eggs fall to the bottom and attach themselves in a similar fashion. But, at this time, the assembled fish dart wildly about, and the water becomes cloudy with the shed fluid of the milk. The eggs thus become fecundated as they fall, and the development of the young within the ova sticking to the bottom commences at once.

The first definite and conclusive evidence as to the manner in which herring spawn is attached and becomes developed that I know of, was obtained by Prof. Allman and Dr. MacBain in 1862 in the Firth of Forth. By dredging in localities in which spent herring were observed on the first of March, Prof. Allman brought up spawn in abundance at a depth of fourteen to twenty-one fathoms. It was deposited on the surface of the stone, shingle, and gravel, and on old shells and coarse shell-sand, and even on shells of small living crabs and other crustacea, adhering tenaciously to whatever it had fallen on. No spawn was found in any other part of the Forth; but it continued to be abundant on both the east and west sides of the Isle of Man up to the 13th of March, at which time the incubation of the ovum was found to be completed in a great portion of the spawn, and the embryos had become free. On the 25th scarcely a trace of spawn could be detected, and nearly the whole of the adult fish had left the Forth.

Prof. Allman draws attention to the fact "that the deposit of spawn, as evidence by the appearance of spent herrings, did not take place till about sixty-five days after the appearance of the herring in the Firth," and arrives at the conclusion that "the incubation probably continues during a period of between twenty-five to thirty days," adding, however, that the estimate must for the present be regarded as only approximate. It was on this and other evidence that we based our conclusion that the eggs of the herring "are hatched in at most from two to three weeks after disposition."

Within the last few years a clear light has been thrown upon this question by the labors of the West Baltic Fishery Commission, to which I have so often had occasion to refer. It has been found that artificial fecundation is easily practiced, and that the young fish may be kept in aquaria for as long as five months. Thus a great body of accurate information, some of it of a very unexpected character, has been obtained respecting the development of the eggs, and the early condition of the young herring.

It turns out that, as is the case with other fishes, the period of incubation is closely dependent upon warmth. When the water has a temperature of 53 degrees Fahrenheit, the eggs of the herring hatch in from 6 to 8 days; the average being seven days. And this is a very interesting fact when we bear in mind the conclusion to which the inquiries of the Dutch meteorologists, and, more lately, those of the Scottish Meteorological Society, appear to tend, namely, that the shoals prefer water of about 55 degrees. At 50 degrees Fahrenheit, the period of incubation is lengthened to eleven days; at 46 degrees to fifteen days; and at 38 degrees it lasts forty days. As the Forth is usually tolerably cool in the month of March, it is probable that Prof. Allman's estimate comes very near the truth for the particular case which he investigated.

The young, when they emerge from the egg, are from one-fifth to one-third of an inch in length, and so extremely unlike the adult herring that they may properly be termed larvae. They have enormous eyes and an exceedingly slender body, with a yelk bag protruding from its forepart. The skeleton is in a very rudimentary condition; there are no ventral fins; and instead of separate dorsal, caudal, and anal fins, there is one continuous fin extending from the head along the back, round the tail, and then forward to the yelk bag. The intestine is a simple tube, ciliated internally; there is no air-bladder and no branchiae are yet developed. The heart is a mere contractile vessel, and the blood is a clear fluid without corpuscles. At first the larvae do not feed, but merely grow at the expense of the yelk which gradually diminishes.

Within three or four days after hatching, the length has increased by about half the original dimensions, the yelk has disappeared, the cartilaginous skeleton appears, and the heart becomes divided into its chambers; but the young fish attains nearly double its first length before blood corpuscles are visible.

By the time the larva is two-thirds of an inch long (a length which it attains one month after hatching), the primitive median fin is separated into dorsal, caudal, and anal divisions, but the ventral fins have not appeared. About this period the young animal begins to feed on small crustacea; and it grows so rapidly that at two months it is 1 1-4 inches long, and, at three months, has attained a length of about two inches.

Nearly up to this stage the elongated scaleless little fish retains its larval proportions; but, in the latter part of the third month, the body rapidly deepens, the scales begin to appear, and the larva passes into the "imago" state—that is, assumes the form and proportions of the adult, though it is not more than two inches long. After this, it goes on growing at the same rate (11 millimetres, or nearly half an inch) per month, so that, at six months old, it is as large as a moderate sized sprat.

The well-known "whitebait" of the Thames consists, so far as I have seen, almost exclusively of herrings, under six months old, and as the average size of the whitebait increases, from March and April onwards, until they become suspiciously like sprats in the late summer, it may be concluded that they are the progeny of herrings which spawned, early in the year, in the neighborhood of the estuary of the Thames, up which these dainty little fish have wandered. Whether it is the general habit of young herring even of those which are spawned in deep water, to migrate into shallow parts of the sea, or even into completely fresh waters, when such are accessible, is unknown.

In the Report on Trawling (1863) we observe:

It is extremely difficult to obtain any satisfactory evidence as to length of time which the herring requires to pass from the embryonic to the adult or full condition. Of the fishermen who gave any opinion on this subject, some considered that a herring takes three, and others that it requires seven years to attain the full or spawning condition; others frankly admitted that they knew nothing about the matter; and it was not difficult, by a little cross-examination, to satisfy ourselves that they were all really in this condition, however strongly they might hold by their triennial or septennial theories. Mr. Yarrell and Mr. Mitchell suppose with more reason that herring attain to full size and maturity in about eighteen months.

"It does not appear, however, that there is any good evidence against the supposition that the herring reaches its spawning condition in one year. There is much reason to believe that the eggs are hatched in at most, from two to three weeks after deposition, and that in six or seven weeks more (that is at most ten weeks from the time of laying the eggs) the young have attained three inches in length. Now it has been ascertained that a young smolt may leave a river and return to it again in a couple of months increased in bulk eight or ten fold, and as a herring lives on very much the same food as a smolt, it appears possible that it should increase in the same rapid ratio. Under these circumstances nine months would be ample time for it to enlarge from three to ten or eleven inches in length. It may be fairly argued, however, that it is not very safe to reason analogically from the rate of growth of one species of fish to that of another; and it may be well to leave the question whether the herring attains its maturity in twelve, fifteen or sixteen months open, in the tolerably firm assurance that the period last named is the maximum."

On comparing these conclusions with the results of the careful observations of the Baltic commissioners, it appears that we somewhat over-estimate the rate of growth of the young herring, and that the view taken by Yarrell and Mitchell is more nearly correct. For supposing that the rate of growth after six months continues the same as before, a herring twelve months old will be nearly six inches long, and at eighteen months eight or nine inches. But full herrings may be met with little more than seven inches long, and they are very commonly found not more than nine inches in length.

Fishermen distinguish four states of the herring. Fry or sile, when not larger than sprats; maties, when larger than this, with undeveloped roe or milt; full fish, with largely developed roe or milt; and spent or shotten fish, which have recently spawned.

Herring fry of the size of sprats are distinguished from full fish not merely by their size, but in addition by the very slight development of the milt or roe, and by the accumulation of fat in the abdominal cavity. Bands of fat are found in the mesentery alongside the intestine, and filling up the interspaces between the pyloric caeca.

Maties (the name of which is a corruption of the Dutch word for a maiden) resemble the fry in these particulars, but if they are well fed, the deposit of fatty and other nutritive matter takes place, not only about the abdominal viscera, but also beneath the skin and in the interstices of the flesh. Indeed, when nourishment is abundant, this infilteration of the flesh with fat may go so far that the fish cannot readily be preserved and must be eaten fresh. The singularly delicate Loch Fyne herring are in this condition early in the season. When the small crustaceans, on which the maties chiefly feed, are extremely abundant the fish gorge themselves with them to such an extent that the conical crop becomes completely distended, and the Scotch fishermen give them the name of "gut-pock" herrings, as much as to say "pouch-gutted fish, and an absurd notion is current that these herrings are diseased. However, the "gut-pock" herrings differ from the rest only in having their pouch full instead of empty, as it commonly is.

As the fish passes from the matie to the full condition, the milt and roe begin to grow at the expense of the nutriment thus stored up; and, as these organs become larger and occupy more and more space in the abdominal cavity, the excess of nutritious substance is transferred to them. The fatty deposit about the intestine and pyloric caeca gradually disappears and the flesh becomes poorer. It would appear that by degrees the fish cease to feed at all. At any rate, there is usually no food in the stomach of a herring which approaches maturity. In all these respects there is the closest resemblance between the history of the herring and that of other fishes such as the salmon—the part corresponding to the herring fry or sile, the grilse and the "clear fish" of large size of the maties.

At length spawning takes place, the accumulated nutrition, transformed into eggs or spermatic fluid, is expelled, and the fish is left in that lean depauperated state which makes a "shotten herring" proverbial. In this condition it answers to the salmon "kelt," and the milt or roe are now shrunk and flaccid and can be blown up with air like empty bags. If the spent fish escapes its myriad enemies, it doubtless begins to feed again and once more passes into the matie state in preparation for the next breeding season. But the nature of this process of recuperation has yet to be investigated.

When they have reached the matie stage, the herrings which are at all times gregarious, associate together in conspicuous assemblages, which are called shoals. These are sometimes of prodigious extent—indeed eight or nine miles in length, two or three in breadth, with an unknown depth, are dimensions which are credibly asserted to be sometimes attained. In these shoals the fish are closely packed, like a flock of sheep straying slowly along a pasture, and it is probably quite safe to assume that there is at least one fish for every cubic foot of water occupied by the shoal, supposing it to be three fathoms deep, must contain more than 500,000,000 herrings. And when it is considered that many shoals approach the coasts, not only of our own islands, but of Scandinavia and the Baltic, and of Eastern North America, every spring and autumn, the sum total of the herrings which people our seas surpasses imagination.

If you read any old and some new books on the natural history of the herring, you will find a wonderful story about the movements of these shoals. How they start from their home in the Polar Seas, and march south as a great armada which splits into minor divisions—one destined to spawn on the Scandinavian, and one on our own shores, and how, having achieved this spawning raid, the spent fish make their way as fast as they can back to their Arctic refuge, there to repair their exhausted frames in domestic security. This story was started in the last century, and was unfortunately adopted and disseminated by our countryman, Pennant. But there is not the least proof that anything of the kind takes place, and the probabilities are wholly against it. It is, for example, quite irreconcilable with the fact that herring are found in cods' stomach all the year round. And the circumstance to which I have already adverted, that practiced eyes distinguish local breeds of herrings, though it does not actually negative the migration hypothesis, is very much against it. The supposition that the herring spawn in the north in the early spring, and in the south in the autumn, fitted very well into the notion that the vanguard of the migrating body of herrings occupied the first spawning ground it reached, and obliged the rest of the horde to pass on. But, as a matter of fact, the northern herrings, like the southern have two spawning times; or perhaps it would be more correct to say that the spawning time extends from autumn to spring, and has two maxima—one in August, September, and one in February-March.

Finally, there is no evidence that herrings are to be met with in the extreme north of their range, at other times or in greater abundance than they are to be found elsewhere.

In the matter of its migration, as in other respects, the herring compares best with the salmon. The ordinary habitation of both fishes is, no doubt, the moderately deep portion of the sea. It is only as the breeding time draws near that the herrings (not yet advanced beyond the matie state) gather together toward the surface and approach the land in great shoals for the purpose of spawning in relatively or absolutely shallow water. In the case of the herring of the Schlei, we have almost the connecting link between the exclusively marine ordinary herring and the river-ascending salmon.

The records of the herring fisheries are, for the most part, neither very ancient nor (with the exception of those of the Scotch Fishery Board) very accurately kept; and, from the nature of the case, they can only tell us whether the fish in any given year were readily taken or not, and that may have very little to do with the actual strength of the shoals.

However, there is historical evidence that, long before the time of Henry the First, Yarmouth was frequented by herring fishers. This means that, for eight centuries, herrings have been fished on the English coast, and I cannot make out, taking one year with another, in recent times, that there has been any serious fluctuation in their numbers. The number captured must have enormously increased in the last two centuries, and yet there is no sign of diminution of the shoals.

In 1864, we had to listen to odiorous prophecies of the coming exhaustion of the Scotch herrings fisheries. The fact that the returns showed no falling off was ascribed to the improvement of the gear and methods of fishing, and to the much greater distances to which fishermen extend their operations. Yet what has really happened? The returns of subsequent years prove, not only that the average cure of the decade 1869-1878 was considerably greater but that the years 1874 and 1880 are absolutely without parallel in the annals of the Scotch herring fishery, a million barrels having been cured in the first of these years, and a million barels having been cured in the first of these years, and a million and a half barrels in 1880. In the decade 1859-1868, the average was 670,000 barrels, and the highest 830,000.

In dealing with the questions of biology, a priori reasoning is somewhat risky, and if any one tells me "it stands to reason" that such and such things must happen, I generally find reason to doubt the safety of his standing.

It is said that "it stands to reason" that destruction on such a prodigious scale as that effected by herring fishers must tell on the supply. But again let us look at the facts. It is said that 2,500,000,000 or thereabouts of herrings are every year taken out of the North Sea and the Atlantic. Suppose we assume the number to be 3,000,000,000, so as to be quite safe. It is a large number, undoubtedly, but what does it come to? No more than that of the herrings which may be contained in one shoal, if it covers half a dozen square miles—and shoals of much larger size are on record. It is safe to say that, scattered through the North Sea and the Atlantic, at one and the same time, there must be scores of shoals, any one of which would go a long way toward supplying the whole of man's consumption of herrings. I do not believe that all the herring fleets taken together destroy 5 per cent of the total number of herrings in the sea in any year, and I see no reason to swerve from the conviction my colleagues and I expressed in our report, that their destructive operations are totally insignificant when compared with those which, as a simple calculation shows, must regularly and normally go on.

Suppose that every mature female herring lays 10,000 eggs, that the fish are not interfered with by man, and that their numbers remain approximately the same year after year, it follows that 9,998 of the progeny of every female must be destroyed before they reach maturity. For if more than two out of the 10,000 escape destruction, the number of herrings will be proportionately increased; or, in other words, if the average strength of the shoals which visit a given locality is to remain the same year by year, many thousand times the number contained in those shoals must be annually destroyed. And how this enormous amount of destruction is effected will be obvious to anyone who considers the operations of the fin-whales, the porpoises, the gannets, the gulls, the codfish, and the dogfish, which accompany the shoals, and perennially feast upon them; to say nothing of the flatfish, which prey upon the newly deposited spawn; or of the mackerel and the innumerable smaller enemies which devour the fry in all stages of their development. It is no uncommon thing to find five or six—nay, even ten or twelve—herrings in the stomach of a codfish, and in 1863, we calculated that the whole take of the great Scotch-herring fisheries is less than the number of herrings which would in all probability have been consumed by the codfish captured in the same waters, if they had been left in the sea.

Man, in fact, is but one of the vast co-operative society of herring catchers and the larger the share he takes, the less there is for the rest of the company. If man took none, the other shareholders would have a larger dividend and would thrive and multiply in proportion, but it would come to pretty much the same thing to the herrings.

As long as the records of history give us information, herrings appear to have abounded on the east coast of the British Islands, and there is nothing to show, so far as I am aware, that, taking an average of years, they were ever either more or less numerous than they are at present. But in remarkable contrast with this constancy, the shoals of herings have elsewhere exhibited a change capriciousness, visiting a given locality for many years in great numbers and then suddenly disappearing. Several well-marked examples of this fickleness are recorded on the west coast of Scotland, but the most remarkable is that furnished by the fisheries of Bohuslan, a province which lies on the southwestern shore of the Scandinavian peninsula. Here a variety known as the "old" or "great" herring, after being so extremely abundant, for about sixty years, as to give rise to a great industry, disappeared in the year 1808, as suddenly as they made their appearance, and have not since been seen in any number.

The desertion of their ordinary grounds by the herring has been attributed to all imaginable causes, from fishing on a Sunday to the offence caused to the fish by the decomposing carcasses of their brethren, dropped upon the bottom out of the nets. The truth is that absolutely nothing is known on the subject; and that little is likely to be known, until careful and long continued meteorological and zoological observations have furnished definite information respecting the changes which take place in the temperature of the sea, and the distribution of the pelagic crustacea which constitute the chief food of the herring shoals The institution of systematic observations of this kind is an object of international importance, toward the attainment of which the British, Scandinavian, Dutch, and French governments might wisely make a combined effort.

A great fuss has been made about trawlers working over the spawning grounds of the herring. "It stands to reason," we were told, that they must destroy an immense quantity of the spawn. Indeed, this looked so reasonable that we inquired very particularly into a case of the alleged malpractice which was complained of on the east coast of Scotland, near Pittenweem. Off this place there is a famous spawning ground known as the Traith Hole, and we were told that the trawlers worked vigorously over the spot immediately after the herring had deposited their spawn. Of course, our first proceeding was to ask the trawlers why they took the trouble of doing what looked like a wanton mischief. And their answer was reasonable enough. It was to catch the prodigious abundance of flat-fish which were to be found on the Traith at that time. Well, then, why did the flat-fish congregate there? Simply to feed on herring eggs, which seem to be a sort of flat--fishes' caviare. The stomachs of the flat-fish brought up by the trawl were, in fact, crammed with masses of herring eggs.

Thus evey flat-fish caught by the trawl was an energetic destroyer of herring arrested in his career. And the trawling, instead of injuring the herring, captured and removed hosts of their worst enemies. This is how "it stood to reason" when one got to the bottom of the matter.

I do not think that any one who looks carefully into the subject will arrive at any other conclusion than that reached by my colleagues and myself: namely, that the best thing for governments to do in relation to the herring fisheries is to let them alone, except in so far as the police of the sea is concerned. With this proviso, let the people fish how they like, as they like, and when they like. At present I must repeat the conviction we expressed so many years ago, that there is not a particle of evidence that anything man does has an appreciable influence on the stock of herrings. It will be time to meddle, when any satisfactory evidence that mischief is being done is produced.

FRUIT GROWERS ASSOCIATION

Report of the Thirteenth Annual Meeting Which Took Place at La Grande, Ore.

The thirteenth annual meeting of the Northwest Fruit Growers' Association, which includes besides the province of British Columbia the states of Oregon, Washington, Idaho, Montana and Utah, took place at La Grande, Oregon, on Wednesday, Thursday and Friday, the 3rd, 4th and 5th instants, and was attended by representatives from the different states, including professors from the different colleges, and by Mr. J. R. Anderson, deputy minister of agriculture, and Mr. Maxwell Smith, Dominion fruit inspector, from British Columbia.

The attendance throughout was good, the rooms of the Commercial Club, where the convention was held, being at times crowded with people of both sexes, who took great interest in the proceedings, many taking part in the discussions which followed the addresses.

Opening of Convention

The meeting was opened by the president, Mr. E. L. Smith, the veteran fruit grower of Hood River, who called on Rev. Edwin B. Hayes for an opening prayer, after which Mayor J. D. Slater made an address of welcome, followed by a reply from the president and reports from the vice presidents of the various states and British Columbia, the secretary, treasurer and special committees.

Twenty-three addresses were made during the convention, including one on "Home Grown Trees," by Mr. Anderson, and "The Fruit Industry in Canada," by Mr. Maxwell Smith. The addresses covered a wide range, embracing pretty well all phases of the fruit industry, most of them of the utmost value to fruit growers. Probably the most brilliant, eliciting the greatest interest and possibly of the greatest value to our neighbors, was an address by Prof. E. D. Ball, entomologist of Utah, on his successful experiments in dealing with that pest of pests, the codling moth. This pest, although as yet, principally through the efforts of the efficient inspector of the board of horticulture, Mr. Thomas Cunningham, not one which troubles us, must nevertheless sooner or later be a factor in our fruit growing industry to be dealt with, for it is idle to expect, even with the most rigid inspection, that we can wholly escape, and therefore any efficient means of dealing with it is necessarily of the greatest value to all fruit growers.

A Fine Fruit Display

A fine display of fruit grown in the nearby states was made, and the proceedings were enlivened by the music furnished by local talent.

Some desire was expressed that the next place of meeting should be in this province, but the time was not considered ripe as yet for such a step, and therefore, in order to give British Columbia growers an opportunity of attending, Seattle was fixed upon.

The election of officers resulted as follows: President, E. L. Smith, Hood River; vice presidents, A. J. Mason (Oregon), Benj. Burgunder (Washington), Freemont Wood (Idaho), R. C. Cooley (Montana), C. A. Hinkeloper (Utah), J. R. Anderson (British Columbia); secretary, C. A. Tonneson, Tacoma; treasurer, W. S. Orner, Walla Walla.

Mr. Anderson reports the weather in western Washington and Oregon to be very mild, much like that in Victoria; on the Blue Mountains the snow was heavy, and in eastern Oregon then it was from six inches to a foot in depth, affording good sleighing.

David Spencer Ltd.

WESTERN CANADA'S BIG STORE

January Sale News for Monday

Women's Flannelette Waists

ON SALE MONDAY AT 50c.
Values 75c. and $1.00 each, all sizes; 20 dozen to offer for Monday.

Holland Linen Note Paper and Envelopes

Blue Tint (paper), 15c. quire.
Blue Tint (envelopes), 15c. package.

Japanese Rugs

Size 6x9. Monday, $2.50.
Best quality of Oilcloths, 2½ yards wide; regular price 50c. Monday, 25c. square yard.

Millinery for Monday at $2.50 each

New Shapes in Felt, white crowns, with blue, brown and black underbrims, trimmed velvet wings and ornaments. January Sale Price, $2.50 each.

20 Handsome Dressing Gowns and Bathrobes

Values from $12.50 to $15.00. Monday, $6.75.
These are made of heavy eiderdown, trimmed silk, etc. Stripes in pink, sky, cardinal and helio.

$7.50, $8.75, $10.00 $12.00 and $14.50 Bedspreads Monday for $5.00

Of White Linen Embroidered, slightly soiled; samples, etc.; no two alike (slightly soiled).
Embroidered Linen Bedspreads, with shams to match; regular $10.00, $12.50 and $13.75. Monday, $6.75.
Wash Linen Bedspreads; regular $11.00, $12.50, $13.50 and $15.00. Monday, $5.00.
One only. Embroidered Bedspreads and Shams to match; values $14.50, $17.50. Monday, $8.75.
One odd lot of Linens; regular 25c. and 35c. Monday, 10c.
30 dozen of various kinds of Linens, odd lots. Monday, 25c. each.

Children's Worsted Stockings

Sizes 5, 5½ and 6 (double legs). Monday, 25c.

Women's Plain Cashmere Stockings

Double soles. 100 pairs at 25c. pair.

January the Month for Bargains in the Shoe Department

Men's Shoes and Women's Shoes at January Sale Prices for Monday

Women's Box Calf, Goodyear Welt Shoes, at $2.50 pair.
Women's Kid Shoes, with heavy soles, at $2.50 pair.
Men's Heavy Box Calf Shoes, heavy soles, at $2.50 pair.
Men's Velour Calf Shoes, at $2.50 pair.
Men's $6.00 and $6.50 Winter Lace Boots, at $3.90 pair.
These are Scotch makes, waterproof soles and cordovan and crup uppers.

Infant's Stockings

Cashmere. Plain and ribbed; value 25c. Monday, 15c.

Women's Wool Underwear

BARGAINS EVERY DAY THIS MONTH.
Women's Ribbed Wool Drawers; regular $1.25. For 65c.
Children's Ribbed Drawers at 15c. and 35c. each.
Women's White Silk and Wool Drawers, with wide cashmere band, ankle length; regular $4.50 and $5.00. January Sale Price, $1.90.
Women's Indian Cashmere Combinations, natural and very elastic, also unshrinkable; regular $4.50 and $5.00. Monday, $2.75.
Women's White Merino (pure wool) Vests and Drawers; regular $3.00 and $3.50. Monday, $1.50. All sizes.

Cream Laid

Creamlaid (paper and envelopes), 15c. box.

Black Taffeta Belts

20 only, at $1.75. Monday, $1.00 ea.

Hand Bags

At January Sale Prices
Colors, Green, Blue, Black, and Brown; all with the latest handles, and every bag fitted with purse; values $1.75 to $3.00. For $1.25 each.

Women's Flannelette Waists

Fancy Stripes at 75c. and $1.00 each. Monday, 50c. each. All sizes (20 dozen.)

Fancy Neckwear

Values in Fancy Stock Collars, at 35c., 50c. and 65c. Monday, 25c. each.

Fancy Ribbons

4 and 5 inches wide.
Taffeta, 4 and 5 inches wide; Duchesse, 4 and 5 inches wide. Values 40c. and 50c. yard. For 25c. yard.

Women's White Glace Gloves

Every pair guaranteed; all sizes. Regular $1.00. For 75c. pair.

Millinery Department

200 Ornaments in Paste, Steel and Jet; values 25c., 35c. and 50c. Monday, 10c. each.
400 Fancy Wings in all colorings; values up to 75c. Monday, 10c. each.
50 Maids' Caps, 10c. each.
75 White Ostrich Tips, Monday, 25c. each.
Trimmed Millinery at $2.50.
On Monday we will show another lot of Trimmed Hats; values $4.50 and $5.00. For $2.50 each.

Jackets

For Women at $2.50 each.
Tight-fitting Jackets in fawn, black and mixtures, 40 coats only to offer at this price; values from $5.00 to $12.50.

Dress Gowns and Bath Robes

Made of imported striped eiderdown and trimmed with silk frills, tucked silk collars, etc.; values $12.50 and $15.00. Monday, $6.75.

Book Department

15 of the Boys' Own Annuals. Monday, $1.25.
15 of the Girls' Own Annuals. Monday, $1.25.
4 of Chums. Monday, $1.25.

Pen Points

The Falcon,
Bank of England,
Bank of Montreal,
All 25c. for 12 dozen.

ANOTHER FIRE VICTIM.

Minneapolis, Jan. 13.—F. S. Adamson, superintendent of the Pillsbury-Washburn Company's system of elevators, who was badly injured by inhaling smoke and heat during the West Hotel fire last Wednesday, died this morning. This death is the tenth as a result of the fire.

DR. HARPER'S OBSEQUIES.

Body of Late President of Chicago University Removed to Haskell Hall

Chicago, Jan. 13.—The body of William L. Harper, the late president of Chicago University, was today removed from the Harper residence to Haskell Hall, within the grounds of the university, where it will lie in state until tomorrow at 7 p. m., when the funeral exercises will be held in the Mandell Hall. The casket when borne from the residence today was preceded by twenty members of the university council. Two thousand students with bared heads stood in a drizzling rain while the cortege passed through the college campus. John D. Rockefeller Jr. arrived in Chicago this morning to attend the funeral.

IRELAND AND THE EMPIRE.

Toronto World.

The public opinion in Britain on the tariff question is curiously mixed is made evident by the remarks attributed to Thomas Wallace Russell, M. P. for South Tyrone. He started off with a declaration against Mr. Chamberlain's policy, yet the rest of his remarks were all for a protective policy in aid of Irish industries. Nothing could better exemplify the transition stage in which Britain now is with regard to its fiscal system. Ireland, according to Mr. Russell, will be absolutely ruined if the cattle embargo is removed. Yet at the same time corn must be admitted free, evidently to assist the Irish stock raiser. Evidently Ireland has not realized her position, but insists on remaining one of the British isles while objecting to the obligations that attitude entails.

LAWS AGAINST EVERYTHING BUT USURY.

Montreal Daily Star.

There is not a decent man in the community who does not think that usury levied on the poor and the ignorant is morally indistinguishable from a crime. At the least, it is contrary to the public interest that it should be allowed to flourish.

Yet it is not illegal. Universal public sentiment has so far failed to get itself crystalized into law.

We have laws against—

A mother stealing a loaf of bread for a crying child.

Stealing a three-cent ride from a rich street railway company.

Standing still on the street when the police say "Move on!"

Hiring a cab on election day.

Littering the roadway with paper.

Keeping pigs in the city.

Being without visible means of support.

Keeping a gambling house.

Cruelty to a cat.

Kissing in the park.

But a usurer may enslave a man and then torture him and his family almost to the verge of madness with impunity. He can bring a crying woman to his office to beg for mercy, when she has already paid him back the money which he loaned her twice or thrice over; and the law cannot touch him. He can drag a man from his job, break up his home, and finally drive him into exile, by demanding a merciless hundred and twenty per cent. on his money; and the law becomes his obedient accomplice.

COLLISION REPORTED.

Freight Train on L. & N. Collides With Theatrical Special.

Louisville, Ky., Jan. 13.—The general offices of the Louisville & Nashville here have been advised that a collision between a freight train and a special carrying "The Little Johnny Jones company," near Rapton, Alabama, this morning, several members of the company were injured and one of them very seriously. The officials here have received no names.

STANDARD OIL INVESTIGATION.

Hearing of Argument in Rogers Case Adjourned Until Monday.

New York, Jan. 13.—The hearing of the argument on the question whether H. H. Rogers, vice-president of the Standard Oil company, shall be compelled to answer the questions asked by Attorney-General Hadley of Missouri was adjourned today until Monday morning. The counsel had presented some of their arguments. Justice Gilders did not give any decision as to which Mr. Rogers must answer.

FRANCE AND VENEZUELA.

Both Countries Are Diplomatically Marking Time.

Paris, Jan. 13.—Despite the fact that the official communications are no longer exchanged between France and Venezuela the foreign office has not yet despatched orders for M. Taigny, the French charge d'affaires at Caracas, to demand his passports. Neither has M. Bougourgal, the Venezuelan charge d'affaires here, received an official intimation of the suspension of relations between the two countries. In diplomatic circles there is still hope that President Castro will give way under pressure, but in the eventuality of a complete rupture occurring France's action will be carried out with the entire concurrence of the United States.

PROMINENT OFFICIAL ARRESTED.

New York, Jan. 13.—Gen. James R. O'Beirne, for years prominent in Republican politics in this city and has held a number of offices under the United States government, whose name is given as president of the literature of the Force of Life and Chemical company, the medical director of which is Dr. Wm. Wallace Radley and assistant medical director Mrs. Laura H. Wilson, were yesterday arrested by federal authorities and held in $2,500 bail each for examination a week from to-day.

Gen. O'Beirne has been a special agent of the treasury department, assistant commissioner of immigration in the port of New York and a commissioner of charity in this state. He became president of the concern in September last, when E. Virgil Neil, its alleged organizer, and first president, resigned. Gen. O'Beirne was seen following the arrest, but his counsel refused to allow him to be interviewed.

The prisoners are charged with conspiracy to obtain money under false pretences by the use of the United States mails.

NOTICES IN THE OFFICIAL GAZETTE

A Few Minor Appointments — New Companies Are Incorporated.

Following are notices appearing in yesterday's issue of the British Columbia Gazette:

Orville DeWitte Hoar, of Golden, assistant superintendent Rocky Mountain Park of Canada, to be a justice of the peace.

Percy F. Scharschmidt, of Bennett, water, to be justices of the peace.

Alfred Edward Watts, of Wattsburg, and Michael James Halpin, of Whitewater, to be justice of the peace.

William Scowcroft, of the city of Victoria, to be a justice of the peace.

Edward Courtney Stephenson, of Hazelton, J. P., to be deputy coroner for the province of British Columbia.

Robert Alexander Anderson, of Cranbrook, to be a police magistrate for the city of Cranbrook, and to have jurisdiction under the "Small Debts Act" within the Cranbrook Electoral district.

Alfred Seymour Black, of Greenwood, solicitor, to be a coroner in and for the province of British Columbia, in the place of Geo. Foster, of Greenwood, M. D., resigned.

Arthur B. Diplock, of North Vancouver, J. P., to be a coroner in and for the province of British Columbia.

David Gemmill Dick, of North Vancouver; Henry Lovekin Edmonds, of New Westminster, barrister-at-law, and William Edmund Burritt, of Hedley, barrister-at-law, to be notaries public in and for the province of British Columbia.

Sealed applications for a charter to operate a ferry over the Bells Coola river, about 25 miles above the mouth, will be received by the honorable the chief commissioner of lands and works up to and including the 28th of February next. Applicants must state the kind and size of vessel it is proposed to use, the method of operating and the tolls which it is proposed to levy for the carriage of passengers, horses, vehicles and cattle, etc.

Sealed tenders, marked "Tender for Timber Limit, Gambier Island," will be received up to noon of Saturday, the 3rd day of February, 1906 from any person desiring to obtain a special licence under the provisions of the "Land Act" for the purpose of cutting timber from a timber limit situated on Gambier Island, New Westminster district, described as follows:

Certificates of incorporation have been granted as follows: Harris & Bodwell, Ltd., with a capital of $25,000; The Clark & Stuart Co., Ltd., with a capital of $150,000; the Canadian Mack Jack, Ltd., with a capital of $100,000; the Royal Business Exchange, Ltd., with a capital of $25,000; the Coast Quarries, Ltd., with a capital of $25,000; the A. W. Jones, Ltd.; with a capital of $11,000; the Crescent Mines Ltd., with a capital of $1,000,000; the Canadian Territories Railways Syndicate with a capital of $20,000.

Monkey Brand Soap makes copper like gold, tin like silver, crockery like marble, and windows like crystal.

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VOL. XLVIII.,

Chamberlai Triumph

h and All His Canc eturned Yesterday Birmingham.

Victory Proves That Fisc form Agitation Has Just Begun.

London Has Gone Distinc cral and the Landsl Continues.

LONDON, Jan. 17.—The mo inent feature of today's returns is the wholly un stand made by Birmingha only were all of Jos. Cham seven candidates returned, Chamberlain himself secured a of five thousand, while the ma the others averaged 3,000.

Even allowing that the Libe didates were not very strong as were practically uncontested at general election and though the organization was not as good as parts of the country, the results mingham are of the highest imp They prove the groundlessness Liberal contention that this gene tion has killed the fiscal agita a generation to come. Besides the unabated confidence of Birm in Mr. Chamberlain, the results also to confirm what already h noted in isolated contests that t didates who openly professed pr list leanings had good support some cases were victorious.

A Striking Contrast

The outcome at Birmingham striking contrast. While Mr. stands discredited as a leader, supporters all swallowed up a self angrily criticized from his o Mr. Chamberlain issues from test with flying colors. His co a large extent justifies him in p ing in the agitation, and he is sition to argue that it was Mr. B timidity which lost the campai consider the section of the Unio the proter joist side had predict such result. And it is now hint the party must in future look Birmingham, the pope and guida it is the [illegible] the results mingham to have any great effec campaign as a whole. Many of polls will not be declared until to but those published tonight show Liberal tide still runs strong.

London Has Gone Distinctly L

no less than twelve seats show eral gains. While the total gain Liberals for today number 22, onists have made only one solita Viscount Castlereagh having the seat from the Liberals at M Portsmouth, which had previou represented by two Unionists elected two Liberals and this, the fact that a fifth candidate, a threatened to split the Liberal v laborite, however, came third, very large vote, the Unionists the bottom of the list.

The members already elected tributed as follows: Liberals 1 onists 73, Laborites 31, Nation Of the 23 London seats poll 16 were won by the Liberals, 12 being net gains.

Sir Arthur Conan Doyle, wh the Unionist interest for Hawi burghshire, Scotland, has been

All Eyes on Birmingha

The pollings today are the of the present election. They 92 seats. Great interest is Chamberlain's contest in West ham, but among the candidates day are defending their seats ney Buxton the postmaster g the Poplar district of the Tow lets and St. John Broderick, th secretary of state for Indi Guildford division of Surrey, uel Evans, Liberal, in the mid sion of Glamorganshire and liam Evans Gordon, Conservati Stepney division of the Tower Sir William is the author of t exclusion bill on account of Jews in Stepney are up in arm him. The present indications former premier Balfour will another seat in parliament u the elections, when one of th elected members will probably his favor so as to allow Mr. to try to enter the house by a by-election.

Today's unopposed returns, clude the Hon. Edward Bla Nationalist, south division of and James Gordon Swift MacN Nationalist, South Donegal, respective totals as follows: 130, Unionists 55, Irish Nation Laborites 29.

Chamberlain Triumpha

Birmingham, Jan. 17.—Bir today remains true to Cha electing all of his candidates i en divisions, and except in th Sir John Stone, by large majo John Stone's defeat in the eas was expected by the Unioni selves, and hence his retentio seat by a majority of only a dred is regarded as satisfact Liberals had been optimistical ing that the results throughout try would affect Birmingham, the Liberal sweep was not abl come Mr. Chamberlain's great popularity. Immense crowds hours in City Hall square aw results. When the figures we there was tremendous cheering larly when it was announced John Stone had been re-elect

Mr. Chamberlain himself did to the city hall tonight but re turns at his home. His maj 5,000. Large crowds are par streets tonight.

DR. BURNETT DEA

Washington, D. C., Jan. Swan M. Burnett a noted ocul city and the former husband Frances M. Hodgson Burnett oress died suddenly today of ure.