**Our Motto: "SUUM CUIQUE."**

(To Every Man His Own.)

**The Mail and Advocate**

**Issued every day from the office of publication, 167 Water Street, St. John's, Newfoundland, Union Publishing Co. Ltd., Proprietors.**

ST. JOHN'S, NFLD., AUGUST 3, 1915

## OUR POINT OF VIEW

A walk through the suburban districts reveals the fact that there is a great and growing desire among our city growing desire among our city folk to get out into the country and build their homes in surroundings that are pure and wholesome. Everywhere ones goes he meets evidence of this new spirit among our people, in neatly built villa or bungalow.

Some of these houses are isolated, but others again stand in groups, along certain defined lines, made to represent future streets. Whilst viewing this migration of the city countrywards, one is very forcibly struck tendency means, and we ask ourselves the question, whether the city is doing its part in this respect.

The part we believe the city should perform is to see that streets are properly laid out. By properly laid out is not meant the mere delination of street courses, but the grading should also be regarded, if we hope to have well regulated thoroughfares. This is a matter of the gravest importance, and yet it is a question that is entirely lost sight of.

When people are allowed to erect houses as it suits their fancy, without regard to the topography of the land, there is sure to be lots of trouble later on when it comes to the laying down of sidewalks or of grading the street. Once the houses are built it can be only at the cost of removing them or raising them or undermining them that a proper gradient can be obtained, conditions, which in the majority of cases, because of the strikingly uneven character of the land, make improvement next to impossible where limited finance interferes.

We can prevent all this trouble and the prospect of an untidy city of the future, by taking the proper measures beforehand. Before any houses are built it should be the duty of the City government to see to it, that streets are laid out and graded.

To do the thing properly, of course, water, sewerage and lights should be put in when a new street is projected. This indiscriminate building should be controlled in some way, and parties having building lots to let or sell, should be made to conform to some well-directed plan for city extension.

As an instance of lack of proper laying out of streets, we need not go far for an example, they are many in the older as well as in the newer sections of the town. Cabot Street furnishes one very striking example of a street up on one side and down on the other, and Field Street provides a sample of another kind, with its hill in the middle, making a very unsightly prospect.

There is scarcely a street in the whole town that does not show signs of having been put there in a haphazard sort of way.

This slovenly beginning is costing us the pain and chagrin of having a city, whose natural site has been marred, by our lack of taste and that faculty of taking forethough, which is deplorable.

Once a street (?) has been built upon it is too late to think of improvements. We have some other remarks to make along these lines which we intend to take up in anotehr issue.

## CIVIC ADMINISTRATION

(From The Ottawa Citizen)

ONE of the objections frequently advanced in opposition to the city managership plan of municipal administration is that such reform is but an adapation of European civic government. That this is not so is clear from a review of conditions abroad in this department of popular administration.

In Germany municipal government is in the hands of a professional class; in Prussia the chief executive power vests in the administrative council or magistrate, one or two of whose members hold the rank of burgermeister.

The burgermeister is primus inter pares, and not at all the great panjandrum type of executive. He is trained for the work and is, if successful, advanced to the position in larger cities. He draws no such salary as Aemrican cities are paying managers, but enjoys a comfortable security in office that contrasts with the precarious tenure of the American. subject to the whims of a capricious electorate.

The burgermeister presides over the council in session, and superintends the execution of orders. He supervises the detail work of municipal departments, but has a restricted power of appointment. Members of the council who receive pay are heads of departments. Division into departments is much like our own. In addition to the council there is a deliberative body acting as an advisory board to the council and as a legislative department.

The supposition that the British town clerk is the pattern for the office of city manager is likewise incorrect. The clerk's position is decidedly inferior to that of a city manager. The former is chief legal officer of the muncipality and performs some functions of the trained professional administrative agent.

In those American cities that employ a manager that official is not at all a legal adviser, but he has responsible control of all departments, with power of appointment and removal.

In Germany and in Britain the prestige of the municipal office is sufficiently great and prized to offset the deficiencies in salary as an attraction for men of experience and high qualification.

In France the chiefs of departments may not be experts, but the permanent working staffs are all composed of professionals. The whole underlying fabric of French municipal service is founded upon an army of trained men who by virtue of experience and technical training master the details of public office, adjust the complicated machinery of officialdom and create that record of efficiency commonly credited to their superiors—a condition not unknown in other branches of public service elsewhere. But under the city manager plan the individual who does the work gets the credit—or the blame.

The whole trend of European municipal administration is towards the employment of expert professional advice, and service and towards the centralizing of authority and responsibility.

At the present time, when we are beginning to appreciate the fundamental defects in our form of municipal administration, it is well to investigate the working not only of the city manager plan, but of all the methods which are in vogue in other countries.

The ideal plan for one people may not suit others equally as well, and the solution may eventually be found in a combination of the working features of several methods.

## NOTES ON THE HABITS AND LIFE HISTORY OF CANADIAN SALMON

By Professor E. E. Prince, Dominion Commissioner of Fisheries, Ottawa.

(Continued)

In ascending there are no obstacles which will deter the salmon, and their extraordinary leaps, 10 to 12 feet being a usual limit, are known to every one. Dr. A. Landmarks thinks that a 16-foot jump is possible if there be a deep pool immediately under the fall to be ascended. A recent observer, Dr. R. T. Morris, asserts that salmon can leap falls 18 feet high, and supports his declaration by published photographs. Salmon will certainly attempt to mount the most precipitous and forbidding falls and cascades. In ascending, the schools have been known to accomplish a distance of 40 miles a day.

Livingstone Stone estimated the rate in the Sacramento at two miles, and in the Columbia at three miles a day; but salmon, above tide-head, have been found with sea-fish undigested in their stomachs, and their rate of ascent must be vastly greater. The earlier runs appear to be most leisurely, and the fish appear, indeed, to regulate their rate of progress by the condition of the eggs in their ovaries. In their ascent, they practically eat nothing.

Dr. Noel Paton's researches on Scottish salmon have shown that a peculiar degeneration of the walls of the stomach takes place, a "catarrh" it may be called, filling its chamber with a dense mucous mass, in which degenerate cells largely occur, and rendering the organ incapable of digestive functions.

The same feature has been noticed in some of the fresh-water salmonoids (**Coregonus**), the rigid condition of the stomach precluding the possibility of normal digestion. In the Pacific rivers it would, of course, be impossible for the migrating schools, on account of the vast numbers of fish composing them, to obtain any food in the ordinary sense, and the same physiological law applies to the schools of salmon in all rivers.

Some doubt has been thrown on the generally accepted theory that salmon return to their own rivers. Certainly, on the two famous Canadian rivers, the Restigouche and the Miramichi, anglers and practical fishermen have always held that, though the rivers are practically adjacent, the schools belonging to one river never enter the other; indeed, the difference in size and general appearance is such that the men on the river distinguish them at once.

This may be said to apply to rivers generally, the salmon of St. John River are unlike those of the Saguenay or Godbout, and none of them are identical in general appearance and build with those native to the rivers around the Bay of Chaleurs.

Some accurate experiments in Scotland proved that salmon do, for the most part, return to their own rivers, and of 58 marked fish set free, 34 were afterwards caught ascending the same river, and the other 22 were taken in fixed tidal nets at distances of from half a mide to 500 miles from their native river.

The Pacific salmon may not be so strictly true to this supposed instinct, and Dr. Starr Jordan lays little stress on it, but regards as somewhat accidental this supposed fidelity to its native stream.

He says: "It is the prevailing impression that the salmon have some special instinct which leads them to return to spawn in the same spawning grounds where they were originally hatched. We fail to find any evidence of this in the case of the Pacific coast salmon, and we do not believe it to be true. It seems more probable that the young salmon hatched in any river mostly remain in the ocean, within a radius of twenty, thirty, or forty miles of its mouth. These, in their movements about in the ocean, may come into contact with the cold waters of their parent rivers, or, perhaps, of any other river, at a considerable distance from the shore. In the case of the quinnat and the blue-back, their 'instinct' seems to lead them to ascend these fresh waters, and, in a majority of cases, these waters will be those in which the fishes in question were originally spawned. Later in the season, the growth of the reproductive organs lead them to approach the shore Galley 7—Fishery—
and search for fresh waters, and still the chances are that they may find the original stream."

Of the respective numbers of male and female fish which pass up during the season, some interesting facts have been observed Thus, in the Penobscot River Marine, U.S., out of 100 salmon examined, 34 were male and 66 were female, a proportion of the sexes which showed even greater disparity in the land-locked variety of Schoodic salmon, in which over 1,000 out of 1,604 specimens proved to be female, and the balance of 604 were males.

In the Dominion hatcheries, the female salmon caught often exceed the male; but, on the other hand, in some years, as in 1893 there was a large surplus of male fish. As a rule the ova of three female fish may be fertilized by one ripe male fish. No doubt the proportions of the sexes vary according to the portion of the year in which the captures are made, as there are grounds for thinking that in the earliest runs the female fish predominate and the parent salmon taken for the Dominion Government hatcheries are usually what are termed "late" runs.

In most rivers, salmon run almost the whole year through, yet the main runs are confined to definite months of the year, an unusual drought of some special condition in the season retarding or accelerating the ascent of these main runs.

"In America," said Dr. Browne Goode, "the southern streams seem to yield the earliest fish. In Connecticut they appear in April and May, in the Merrimac in May and June, in the Penobscot most abuntantly in June and July, though some come as early as April."

Rivers are known as early or late, not in allusion to the period of spawning, but to the early or late appearance in general of the main runs of salmon. The Tamar, between Devon and Cornwall, is, as might be expected, an early river, and the Tweed is a late river; but the rivers of the east coast of Britain are all early, while those pouring into the Atlantic are late.

The time at which spawning salmon approach their rivers is really a somewhat complicated one, and appears to depend very much upon local features in the respective rivers; but the periods, annual or otherwise, at which salmon return or rather the interval elapsing between their descent and their next ascent, has been a matter for much discussion.

Experiments in Norway clearly proved that some salmon spawn annually, but while the proof was not conclusive that all do not do so, the fact that in a series of marked fish 20 were caught in the first year following, whereas 30 where taken in the second year following supports the experiments on the Penobscot River within certain limits.

Of the growth of salmon, there is much accurate information, though the records are somewhat scattered. As I have, in a previous report (Departmental Report, 1895, page xx.) pointed out, "it takes nearly 250 alevins to make up an ounce, yet in sixteen months a weight of two ounces is reached, and twenty months later, when, as a smolt, the fish seeks the sea and becomes, after twelve or fifteen weeks more, a grilse of seven pounds or eight pounds weight i.e., achieved, an increase of 68 times his own weight in three or four months."

A salmon 2½ feet long usually weighs 9 pounds or 10 pounds; when 3 feet long, 16 or 17 pounds, and when of the length of 4 feet, the weight is usually 50 pounds. Fish, 60, 70 and 80 pounds in weight are taken in some rivers, but the increase to these enormous weights is accomplished mainly by an increase in vertical depth and lateral thickness, rather than length. The well-known experiments of the late Duke of Atholl demonstrated the increase in weight in the short space of six months of salmon 10, 11½ and 12½ pounds weight to a weight of no less than 17, 18 and 19 pounds respectively.

For facility of reference, the following salient points are summarzed in conclusion:—

(I.)—Seven stages may be distinguished in the life of the salmon: (a) **the egg,** (b) **the larva,** (c) the parr which descends after one or two years, (d) the smolt silvery stage assumed by the parr in its descent, (e) the grilse returning in a few months, or in a year or more, which may be sexually mature, and as a grilse kelt descending to the sea; (g) the adult salmon, eight pounds weight, or more, depositing and fertilizing spawn annually or biennially, (h) the salmon kelt descending in the spring subsequent to spawning.

(II.)—The male salmon at the spawning season greatly changes in form and appearance, especially in Pacific species.

(III.)—A considerable proportion of parent salmon organs die on all salmon rivers, and this is especially noticeable on Pacific rivers.

(IV.)—Salmon cease to feed, and their digestive organs become non-efficient after entering fresh water.

(V.)—Each river has its own race of salmon, which show local peculiarities; and these in the main return to their own rivers.

(VI.)—Female salmon requently predominate.

(VII.)—Salmon spawn annually, though some may double their weight in six months.

(IX.)—There are runs of salmon which return without spawning, apparently omitting spawning for a year.

## WIRELESS ACROSS THE PACIFIC

Regular Service Now Between Honolulu and Japan —3,380.

Tokio, Japan, July 27.—Wireless communication was successfully inaugurated to-day between the new station at Funabashi, near Yokohama, and the Hawaiian Islands. Messages by wireless telegrphy between Japan and the United States will be regularly accepted in the near future.

The distance between Funabashi, where a new wireless station has been erected, and Honolulu is about 3,380 miles. Experiments with wireless telegraph between the Japanese and Hawaiian Islands have been going on for several years.

Communication by wireless telegraphy between the station at Bolinas Bay, California, and the Hawaiian Islands, a distance of 2,100 miles, was opened on September 24, 1914.

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