

after the retreating lad. I can yet see that puffing, crying beast, following our canoe—just when we most needed silence—fairly begging to be taken in.

It is at night when these big active seals hunt in these dark inlets and bays, when the mighty slap of their flippers on the water sounds like the discharge of a great muffled gun, then it is when the salmon are caught in the big sharp teeth, guided to their impact by the long, strong, white feelers that so abundantly mustache the mouth. Once the fish is impaled on the two pair of large incisors all the incurved points of the smaller teeth, and they each have four points, close into the flesh and all its struggles will not free it.

It is odd to see this marine animal protrude its fat, red tongue, glare out of its cup-like set big brown eyes, elevate and depress the bristles that form the eyebrows and sigh and groan and sob in a most human fashion.

The tenacity of life is wonderful in this beast. I have seen the salmon men spearing and prodding and clubbing the poor things that accidentally got into their nets and the shower of blows would much sooner have stunned an ox. You will note another difference between these seals and the big member of this marine family—the sea lion. The latter has flippers that bear no fur, while the hair seal has flippers furred to the edge where the claws protrude. While the sea-lion—strange to say—has

fully matured adults—excepting the man-wounded claws on the middle of the backs of his flippers, just as though our nails were on the backs of our hands.

When about a year old the white spotted coat of the hair seal changes to the yellow, sunburnt colour of the adults. The top of the coat is always sun-faded. These are totally different from the common hair, or harp seal of the Atlantic, and of course do not bear the thick, valuable coat of fur of the true fur seal.

The hair seal is coated with a thick layer of rich fat beneath the skin, about one inch deep. The flesh is of a beefy red and both fat and flesh are much relished by the coast tribes. It is a fish-formed flesh and smells of fish oil when handled, but the palate of a coast Indian is none too delicate. The hide of the animal is well worth preserving. Be sure that you skin it as free from fat as possible. This is not hard. Salt it well, stretch it and powder it thoroughly with mixed alum and saltpetre, powdered, equal quantities. Let it dry until the skin is bleached white and dry and you will have an odd and beautiful rug for the floor.

Here is an animal that, as far as we can see, has no enemies except man. Its food and drink are inexhaustible. It has no prevalent disease, as all

of the ones that we find dead upon the beach are fully matured adults—excepting the man-wounded ones. It is most inhuman to shoot at these poor, harmless creatures. We often find them dead upon the beach with the telltale bullet mark. True they take a few fish, but until we men disturbed the balance of nature in the salmoide their takings were unnoticed after hundreds of years preying on this fish.

This seal when cornered can put up a very hard fight. Once I saw a salmon fisher taking a net-captured seal from the hold of the scow where he had thrown it. It snarled and growled and barked savagely as he approached. It turned to run into a dark corner and he seized it by its hind flippers and threw it upon the deck. It roared at him in a perfect paroxysm of fury, snapping and struggling towards him. Again he seized it and threw it into a boat so that we might have it for a specimen—that seal knew the way out of a boat, there came a flapping climb and a splash and we were glad that we had lost so determined a specimen.

There is one place at the north end of Denman's Island where great numbers of seals come ashore at night and sleep in the sand. It is odd to see them all slip into the sea at our approach, leaving the sands patted down and depressed into a regular series of smooth sleeping-holes—all just around the high tide line.

DOUBLE WINDOWS AND DISEASE

By GEORGE DANA PORTER, M.B.

SITTING one day in a very close and stuffy cabin on a St. Lawrence River steamboat, one of the passengers asked the captain why they could not arrange the ventilation a little better.

"Well, you see it's this way," he replied, "you remember the old rhyme—

'Pea porridge hot, pea porridge cold,
Pea porridge in the pot nine days old.
Some like it hot, some like it cold,
Some like it in the pot nine days old.'

The passenger had not forgotten it. "Well," continued the captain, "that's what I'm up against. Some like the air hot, some like it cold, and some like it in the cabin nine days old."

There is no accounting for tastes, but there is for other things, and tuberculosis, which has from ancient times until now a greater death rate than any other disease, is largely accounted for by the indirect infection from the houses and rooms in which people live. That is one reason why this question is of more importance to the women than to the men. They live at home (a good many do), men do not. If the house has become infected by a careless patient, the one who has to remain in the room the longest, runs the greater chance of becoming infected. (A careful patient does not infect those with whom he lives, for tuberculosis is not a contagious disease as is measles or scarlatina.) All cases of tuberculosis are not due to breathing the air of infected rooms. Some are due to an infected milk supply (especially is this the case with children), an occasional case may be due to heredity; a few to direct infection from another patient, but probably the great majority of cases are due to infected homes, offices, stores and workshops.

Why are our Cape Breton miners so free from tuberculosis? When one goes down into the mines and finds that the ventilation there is better than it is in the houses in which their wives and families live, one can understand why they escape, while those who remain at home so often suffer from this disease. Why do so many of our sea captains, roughing the storms, escape from consumption, while they so often have to bury their families from it? Infected homes are largely to blame.

Some people blame our climate. The trouble is we don't get enough of it.

Why do the people living in the milder parts of Labrador (in the southern parts) die of the White Plague and those who trail in the northern parts escape? Because the former live in substantial and permanent dwellings, which are often carelessly infected, while those in the north have no permanent abodes.

Why is this same disease putting such a speedy end to our Indian tribes? Infected tents and houses.

Why, again, do the poor natives in the Island of Nassau, which is blessed with one of the most equable climates on the globe, die in such numbers from tuberculosis? Infected houses and a low resisting power of the natives due to underfeeding.

Our health officers will disinfect houses where needed, and this is very necessary, but the inside of every house needs sunshine and fresh air, for they are nature's great disinfectants. The germs of tuberculosis and many other kinds of germs, become as harmless in the air and sunshine as a bonfire does in the rain. Fire extinguishers have their uses, but water, although somewhat old-fashioned, is not a bad thing to rely upon. Disinfectants will kill the germs of tuberculosis, but some of them are mostly useful because they compel the opening of all doors and windows afterwards to let out the smell, and incidentally, the air and sunshine get in and do the work for which the brimstone gets the credit.

Many men, and many women, too, pride themselves upon reaching the age of "three score years and ten," in spite of the fact that they have lived for the most part in close, stuffy rooms, but not so many have attained to that age when they have had to live in badly infected rooms. Stuffy air does not necessarily kill, though it weakens one. Infected air, when one gets enough of it in the system, kills.

All this may seem a long way off from double windows? But it's not double windows we need, it's fresh air, and how are we to have it when we seal up our houses in the fall, as we seal up our pickle jars a little earlier in the season.

In winter time it is more expensive to heat a house which is properly ventilated, but it also costs more money to buy fresh eggs than it does to buy the older variety; the former, however, are more in demand, and fresh air ought to be also. The slight increase in cost of fuel is worth the price, although Canadian homes are generally overheated as it is.

Fortunately in cold weather, a little opening of the window, preferably from the top, ventilates a room as much as a much larger opening would do in the warm weather, owing to the differences between the inside and the outside temperatures.

A person of sixty years of age sleeps twenty years in his bedroom. That is one room at any rate (and the most important one), where he can get good fresh air (without discomfort if he uses a little extra bedding). These eight hours out of the twenty-four will help compensate for the foul air which he may be forced to breathe during the other sixteen.

In many parts of Canada, the double windows go on early and come off late. There are more than one variety of them, but their pedigree is bad. Some have the lower frames perforated by three or four auger holes, of from about an inch in diameter, down to the gimlet sized variety. Others have a small slit through which the inmates expect to receive enough good fresh air on which to thrive. These openings, however, are generally closed; sometimes by a shutter like arrangement, sometimes with rag stuffing, and sometimes the piled up snow on the outside sill acts the part of Othello and smothers out all the live air that seeks an entrance.

There are only two or three sections in the whole of Canada where double windows are needed for even a part of the year, and they should always have a large pane on hinges which, could and should, be

opened some time at least every day, or at least during the night time, and in our coldest sections, these can be left open for the greater part of the time. Where double windows abound, consumption flourishes.

"God lent His creatures light and air,
And waters open to the skies;
Man locks him in a stinging lair,
And wonders why his brother dies."

Let more air and sunshine into the home. They will likely fade the carpets some, but better have these faded than to see the bloom fade from your children's cheeks.

They used to sing a convivial song which if parodied, might prove of more use to the public than the old one did.

Air, Air, glorious air,
Fill yourself right up to here!
Don't be afraid of it,
Breathe 'till you're made of it,
Air, Glorious Air!

But that means fresh air, for it is as difficult to "extract sunbeams from cucumbers" as it is to acquire the tingle and glow of health which comes from inhaling our good ozone, when one has to breathe and re-breathe the vitiated air so frequently found in rooms battened in with double windows.

Maps from Photographs

PHOTOGRAPHY is the newest addition to the science of the surveyor, and has been brought to a greater degree of perfection in Canada than anywhere else. The utility of this method consists in photographing a region from prominent points, and from the practically continuous photograph thus secured, constructing a topographic map. The employment of this method in government surveys is thus described in a paper by Mr. P. W. Greene, read before the Canadian Society of Civil Engineers:

The instruments employed on the Alaskan boundary survey are two, the camera and the transit. On account of the nature of the country and the climatic conditions encountered, both are necessarily of the simplest possible design. . . . The camera rests on a triangular base, identical with the base of the transit, so that both may fit the same tripod. The camera outfit complete, including case, 7 plate-holders, and 14 plates, weighs about 19 pounds. A full climbing-party usually consists of five men. On reaching the summit of a peak the observer and recorder immediately start on the camera work while the men busy themselves gathering rocks for the cairn which supports the triangulation signal. The camera is leveled up as an ordinary transit, and after focusing is ready for exposure. A series of seven photographs is taken, including the complete round of the horizon, each photograph slightly overlapping the last.