

Health Hints -:- Fashions -:- Woman's Work -:- Household Topics

Riddle of Infantile Paralysis

By WOODS HUTCHINSON M.D.

One mystery after another confronts us when we attempt to solve the riddle of the plague. A most serious obstacle to the early investigators, in line with the great difficulty which they found the disease had in spreading from one human patient to another, was that it was absolutely impossible to infect any ordinary experimental animal with the disease. For decades this obstacle held us fast, until it occurred to one of the bacteriologists that it was just possible the disease could be communicated to the animal nearly allied to man, the monkey. This guess proved a fortunate one, and within a year or so of the time that monkeys were tried it was clearly proven, first, that the disease could be conveyed from the spinal cord of babies who had died of it to monkeys, producing the characteristics paralysis in them, and from these monkeys it could be transmitted to other monkeys.

So clear and positive were these results that Flexner, for instance, at the Rockefeller institute, succeeded in carrying the virus of the disease through twenty-five successive generations. Incidentally, it may be remarked that the utilization of our nearest animal relative, the monkey, for experimental purposes, has proved one of the greatest boons ever granted to bacteriologic science. Through them and through them alone has been proven, within a short decade, the germ cause and method of transmission of three such widespread and terrible diseases as cerebrospinal meningitis, syphilis and sleeping sickness.

But, unfortunately, from a practical point of view, monkeys are only one shade better than no animal at all, because they are extremely expensive, very difficult to keep healthy in captivity, subject not merely to infantile paralysis, but to almost every other disease known to humanity and liable to die with the most heart-breaking suddenness and frequency of acute pneumonia or even of bronchitis, following a common cold, right in the middle of a most important and

vital experiment. When brought to the cold and shivery north from the hot and steamy atmosphere of their native tropics, even when given steam heat and every other comfort their average lifetime in captivity is only about a year or a year and a half. And as they must be used in hundreds to solve the problem of so serious and difficult a disease as infantile paralysis, the path of research is still full of difficulties.

Finally and most baffling of all, although the disease could be transmitted with absolute certainty by taking scrapings from the surface of the spinal cord of one monkey, and rubbing them thoroughly into the mucous membrane of the nose of another, though the spread of the infection could be traced, not through the general circulation, but along and through some curious small veins and lymphatics which pass from the roof of the nose right up through a spongy place in the base of the skull directly to the under-surface of the brain and from that backward and downward to the spinal cord, or the lymph in the infected veins and lymphatics of the roof of the nose, were examined under the most powerful of microscopes, with the advantages of every known device of contrast-staining and tinting, nothing even resembling a germ could be discovered.

Not only so, but when this virus, a mere drop or two of which would certainly produce paralysis and death when injected into a monkey's nose, was put into the very finest and least permeable of porcelain filters, whose pores could only be measured in ten-thousandths of an inch, it would pass through absolutely unchanged and be just as virulent after filtering as before. With only two exceptions, every other known disease germ would have been filtered out of the solution by passing through such a chamberland filter.

The only approach that could be made toward seeing the germs of infantile paralysis was by the method known as trans-illumination or cross-lighting of the microscopic stage by means of very powerful rays of light thrown by a prism, which will enable one to see, not the germs themselves, but their greatly enlarged shadows. When a drop of the virus of infantile paralysis was examined in this way a number of bright points of light and vague rings could be seen, which were presumably the shadows of the actual germ, but these were so vague and shifting that no distinctive or recognizable outline could be made out.

Horsemeat Shops in Paris
In Paris the bronzed horse's head denotes the location of "horsemeat shops," or "hippophagiques," or "horse-meat shops. Since the early seventies of the last century hippophagy has grown so in popularity that there is now no considerable town in France that has not one or more shops for the sale of horseflesh.

"La Belle Dame Sans Merci"

By Nell Brinkley

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WARE if your heart falls into her hands! She is the fairy-woman who never grows up. The childlikeness in her eyes that fascinates you is only another proof of her cruelty; for children are barbarous and the chief light in their eyes is curiosity. Remembering all you have given, accepting your offering in her small soft fingers, she will forget all gratitude in contemplating the curious spectacle of your heart thrust through with an arrow and crying in

ruby drops! She will hold it tight and her eyes will glow and brighten. Another toy! Yesterday, when she was a little girl, she watched a dragon-fly skip over the water on his long legs, and studied the white, woolly rabbit that squeaked when she hugged him. Today she turns your heart over and over and smiles in delight, and the shine in her eyes is the very same as over the woolly rabbit. "Ware the woman who never grows up."
—NELL BRINKLEY.

Fishes Surely Can Hear, Maybe Talk

By GARRETT P. SERVISS.

"The phrase 'silent as a clam' has made me wonder why it is that fish are almost the only animals incapable of making vocal sounds. What is the reason? In the anatomical construction of fishes is any provision made for vocal organs? If not, can you tell me why fishes alone in all the animal world have no such organs?"
—W. M. W.

Putting aside the fact that a clam is not a fish, it may be broadly stated that fishes have no recognized vocal organs. Nevertheless they have external ears. Some fishes surely, and all possibly, can make sounds, but there is no evidence that they regularly employ these sounds as "voices." Still, Dr. David Starr Jordan, who probably knows as much about fish as any man living, remarks that "these sounds may possibly be useful to the species, but they are not well differentiated, nor have they been so investigated as to be well understood."

Dr. Jordan thinks that the "grating" sounds made by some fishes arise from the pharyngeal bones; behind the gills, while the "singing" sounds uttered by other fishes originate in the air-bladder. There is a peculiar "singing fish" known on the California coast as "the midshipman," which may be a joking name originating among sailors.

If we could only live in the water for a while we might come out with some surprising information about the "voices," and the hearing powers, as well as the intelligence, of fishes. But, in fact, the water world is almost unknown to us, except through a few narrow ways of inference, and this in spite of the fact that, if we trace our ancestral lines far back in geological time, we find that we ourselves must have sprung from the ocean.

There are certain nervous terrors which we inherit that may also, possibly, be traced back to the times when our aquatic forebears sought refuge from arrow enemies in the tremulous shadows of sea-caverns.

Although ichthyologists say little about the subject, there are some very suggestive facts which seem to indicate that fishes were not provided with hearing solely to enable them to escape from their foes, such as, for instance, as cunning piscators, like old Isaac Walton, stealing silently along the banks of a trout stream and dropping appetizing baits into the water, with only the sounds that a buzzing fly might make. I risk no scientific reputation in quoting an interesting story told by Dr. C. C. Abbott as an indication that fishes may even have a language.

Dr. Abbott was floating in his boat over a quiet spot in Poaquetting creek, in New Jersey, where bottom springs pour up cool fresh water in abundance, and this was what he saw:

"There, for a space of some five yards square, there was nothing in the water save fishes; but all about them was a dense wall of water-mill-foil and other aquatic plants. The fish were accustomed to the boat and moved to and fro leisurely, from side to side on the weedless space, or were stationary. Suddenly a large roach dashed into the midst of them, and instantly every fish was still as a stone. The roach hesitated for a moment and was gone, and with it vanished every fish in that open space. The others, somehow, learned of danger from this roach, and, as it proved, none too soon, for no sooner had the many small fishes disappeared than a dozen large white perch made their appearance and roamed about the clear space above the spring, evidently in surprise or disappointment. As plainly as a man might startle a crowd by a cry of 'fire' or 'murder,' that roach informed the fishes that were gathered in the clear waters below me that they must seek safety by flight."

Now, in connection with this story—and Dr. Abbott's fame as a careful observer needs no bush—take the following fact, established by scientific authority. In many fishes the swim bladder has intimate relations with the hearing organ. In the simplest condition these relations consist in the prolongation forward of the swim bladder as a blindly ending tube on either side, the blind end coming into direct contact either with the wall of the octocist (hearing organ) itself, or with the fluid surrounding it through a gap in the rigid periotic capsule.

A wave of compression, causing a slight wave of movement of the swim bladder wall will bring about a greatly magnified movement of that part of the wall which is in relation with the interior of the auditory capsule. In this way the perception of delicate sounds may be rendered much more perfect.

So, after all, although they have no external ears, fishes seem to possess an auditory apparatus exceeding in its way as the cries of birds, the barking of dogs or the whinnying of horses?

The roach that Dr. Abbott saw did something during that dramatic instant of motionlessness which vividly conveyed to his little friends a warning which all understood simultaneously; why should it not have been a "voice" that he uttered? All language is not spoken with tongues or spoiled with grammar.

To Roast a Small Joint
In order to economize gas, roast a small joint of meat over a gas ring instead of lighting the oven to it. Well grease a saucapan or casserole put the meat into it (with plenty of extra drippings so that there shall be no risk of burning), put it over a gas jet turned very low, and let it cook. Turn and baste the meat often, and it gets beautifully brown and tender.

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SCHOOLS AND COLLEGES.

When Vegetables Are Plenty

With the market full of vegetables at fairly moderate prices it is a comparatively easy thing to cater for a family at this time of the year. Vegetables are more popular than heavy meats when the weather is warm and several different kinds of vegetables should appear upon the menu.

Jellied Tomato Bouillon.
Baked Steak, Queen Peas, Potato Ribbons, Cauliflower a la Varenne, White Cabbage Salad, Cheese Crackers, Chocolate Mold.

Clam Bisque.
Two cupsful of white stock from veal or chicken, one teaspoonful chopped parsley, one blade of mace, two cupsful of chopped clams, one cupful of cream, salt and pepper to taste (cayenne pepper), two table-spoonfuls butter, two table-spoonfuls flour. Cook clams in the white stock, strain reserve liquor and chopped clams, press through a sieve, add butter and flour, cook together seasonings and cream for five minutes, add yolk of egg well beaten and serve.

Baked Steak.
Select a thick steak. Rub well with

pepper and salt; place in pan and put on top very thin slices of one-hand lemon; sprinkle with paprika, then cover with three table-spoonfuls catsup, one teaspoon Worcester-shire sauce and a good lump of melted fat. Bake fifteen minutes in a hot oven. About five minutes before serving, add three onions, parboiled and drained, to the steak.

Potato Ribbons.
Four large potatoes, frying fat, salt and pepper. Peel the potatoes, and cut them in five shavings round and round the potato, as if peeling them in ribbons of equal length. Throw the shavings into a frying pan with boiling fat, and fry a golden brown. Move them constantly with a silver fork to keep the pieces separate. Drain them and pile lightly on a dish, sprinkle with pepper and salt and serve hot.

Cauliflower a la Varenne.
Trim a cauliflower and place it in salt and water for one hour; then put it in a saucapan of cold water with a pinch of salt, bring it to a boil, rinse the cauliflower and put it again in boiling water seasoned with salt to boil until tender. Cut it in pieces, place it in the center of a hot dish, pour parsley sauce over and garnish with braised carrots or a macedoine of vegetables, placing the cut-up stalks of the cauliflower in the center.

Boiled Green Peas.
Shell the peas just before they are required; put them into a saucapan with just enough boiling water to cover them, a sprig of mint, a little salt, and one teaspoonful sugar; boil them till tender (about fifteen to twenty minutes), with the lid off the saucapan; when done, drain, add a little pepper and a small piece of clarified dripping, and serve at once.

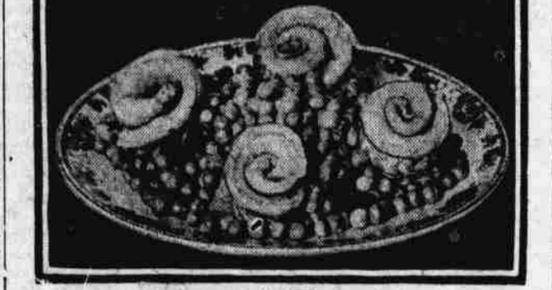
White Cabbage Salad.
One firm, hard white cabbage, oil, vinegar, salt and pepper. Remove the outer leaves of the cabbage, wash it thoroughly and shred it finely with a sharp knife. Mix with it a proper proportion of oil, vinegar, salt and pepper, turn it over a few times till

well mixed and serve. Red cabbage salad is made in the same way.

Chocolate Cream Mold.
One-half ounce isinglass, one and a half pints milk or three-quarters of a pint of milk and three-quarters of a pint of cream, three ounces French chocolate, one-quarter pound lump

sugar, one teaspoonful vanilla. Soak the isinglass in the milk or milk and cream. Grate the chocolate, add the sugar and isinglass and milk; put it over the fire and let it boil up once, stirring all the time to prevent the chocolate setting. Strain it into a basin, add the vanilla, and pour into a wetted mold when nearly cold.

TODAY'S DAINTIEST DISH 'COOKERY IS BECOME A NOBLE SCIENCE'



Fillets of Flounders By CONSTANCE CLARKE.

Sole is a popular dish with the English, and the French also esteem it highly. The American flounder, when filleted, is a delicious and inexpensive dish. It is free of all bone and skin, and the flesh is delicate and fine. The flounder lends itself to every method of cooking that is given for sole. Fillets of flounders with green peas is an appetizing way of preparing the fillets.

Take the fillets from the fish, remove the skin and any bones (if a large one is used, cut each fillet into four pieces), place them on a wetted board and pat them out smoothly with a thick wet knife season the outside of each fillet with a little salt and white pepper, sprinkle lightly with lemon juice, roll up the fillets, place a skewer or a wooden toothpick through them to keep them together, and place in a buttered saute pan. Sprinkle them with lemon juice, place a buttered paper over and put them to cook in a moderate oven for about fifteen

minutes, occasionally basting them over the paper with the liquor from the pan in which they are cooking. When ready dish them on a bed of green peas that have been plainly boiled without breaking, then mixed with a little butter and finely chopped raw parsley. Serve with the sauce.

Sauce for Fillets—Chop up the bones from the fish and place them in a stewpan with a sliced onion, a bunch of herbs, a pinch of salt and six or eight peppercorns; cover with about two cups of cold water, bring to the boil and skim, then simmer on the side of the stove for about twenty minutes; strain off the liquor and mix about two cups of it into four table-spoonfuls of butter, three table-spoonfuls of flour, the pulp of three raw, large tomatoes, a dust of pepper and the juice of a lemon, and stir over the fire until the mixture boils, then strain and serve white hot.

(Tomorrow—Stuffed Eggs for a Picnic Luncheon.)

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